English

INTELLIPOOL™ AUTOMATION

INSTALLATION AND USER'S GUIDE

IMPORTANT SAFETY INSTRUCTIONS READ AND FOLLOW ALL INSTRUCTIONS SAVE THESE INSTRUCTIONS

A label is pasted at the back of the front page of the cover with your confidential codes.

This unique number (ID-Key) will be asked to create your free account www.intellipool.eu.
It is necessary to have an internet connection to access the account for remote management.

IMPORTANT SAFETY INSTRUCTIONS READ AND FOLLOW ALL INSTRUCTIONS SAVE THESE INSTRUCTIONS

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Waste treatment of electronic devices treatment: The crossed-out dustbin symbol placed on the main component parts of the product indicates that it must not be thrown out with household waste. It must be dropped off at an appropriate collection point for recycling of electronic devices (information available your local waste treatment company).
This product contains potentially dangerous substances that may have adverse effects on the environment and human health.
Safety advice on batteries: Batteries may contain dangerous substances, so they must not be thrown out into the dustbin, or be opened, burned or be recharged, as this may cause explosion. Handle a leaking battery with gloves. Remove the batteries in case of prolonged periods out of use.
Security advices about the buffer solution for pH probe calibration: It must be kept away from children, ensuring the bottles are properly closed, stored in a dry and ventilated area and does not expose them to temperatures below zero. pH 4 etalon solution is acid.

DANGER - SERIOUS BODILY INJURY OR DEATH CAN RESULT IF THIS PRODUCT IS NOT INSTALLED AND USED CORRECTLY
DANGER - INSTALLERS, POOL OPERATORS AND POOL OWNERS MUST READ THESE WARNINGS AND ALL INSTRUCTIONS BEFORE USING THIS PRODUCT.

WARNING - Most countries regulate the construction, installation, and operation of public pools and spas, and the construction of residential pools and spas. It is important to comply with these codes, many of which directly regulate the installation and use of this product. Consult your local building and health codes for more information.

IMPORTANT NOTICE
Attention Installer: This Installation and User's Guide contains important information about the installation, operation and safe use of this product.
This Guide should be given to the owner and/or operator of this product.

WARNING - Before installing this product, read and follow all warning notices and instructions in this guide. Failure to follow warnings and instructions can result in severe injury, death, or property damage. Please refer to www.pentairpooleurope.com for more information related to this products.

DANGER - RISK OF ELECTRICAL SHOCK OR ELECTROCUTION

BEFORE WORKING ON INTELLIPOOL: Always disconnect power to the IntelliPool® controller at the circuit breaker before servicing. Failure to do so could result in death or serious injury to service person, pool users or others due to electric shock.

DANGER - BE SURE TO DISCONNECT ALL SUPPLY CONNECTIONS BEFORE SERVICING INTELLIPOOL®. AC Power may be supplied to the relay terminals from other sources.

WARNING –Connect IntelliPool® to a ground-fault interrupter-circuit (GFCI). If this system is used to control underwater lighting fixtures, a ground-fault interrupter (GFCI) must be provided for these fixtures. Conductors on the load side of the ground-fault circuit-interrupter shall not occupy conduit, junction boxes or enclosures containing other conductors unless such conductors are also protected by a ground-fault circuit-interrupter. Refer to local codes for details.

WARNING - This product must be installed by a licensed or certified electrician or a qualified pool professional. All applicable local installation codes and ordinances must also be adhered to. Improper installation will create an electrical hazard which could result in death or serious injury to pool users, installers or others due to electrical shock, and may also cause damage to property.

DANGER - DO NOT PERMIT CHILDREN TO OPERATE THIS EQUIPMENT

WARNING - When mixing acid with water, ALWAYS ADD ACID TO WATER. NEVER ADD WATER TO ACID.When adding any chemical to the pool, be sure to follow the manufacturer's instructions thoroughly.

DANGER - DO NOT MIX SODIUM HYPOCHLORITE AND MURATIC ACID

WARNING - CHEMICAL BURN HAZARD: Make sure all pumps are switched off at the main circuit breakers at the house before drilling into any pipes. Securely fasten all electrical, water and chemical lines. Locate chemical feed pumps and chemical storage tanks in a safe and secure area.

WARNING - Strictly follow the acid manufacturers safety and handling protocols including hand, body and eye protection when transferring or handling acid. Safety precautions should be used when handling Muriatic acid to control pH water levels. Muriatic acid can cause serious body injury and damage pool equipment. Extra care must be taken when installing, maintaining and operating acid pump feed systems. Acid is dangerous to handle and should be properly contained, transported, poured, stored, and dispensed.

WARNING - Check the pH and sanitizer levels of the water before using the pool and make sure filtration is not obstructed.

WARNING - Periodically use an independent pH and Chlorine test kit to verify that pH and chlorine is at a safe level. If the pH and Oxidation Reduction Potential (ORP) or conductivity sensors are broken, depleted or dirty with oils, lotions, or other contaminants, they can report inaccurate results to the system causing incorrect water chemistry, which could harm people or equipment.

WARNING - Check the IntelliPool® display each day to ensure there are no Alarm messages.

DANGER - Water temperature in excess of 100° F (37.7° C) may be hazardous to your health. Prolonged immersion in hot water may induce hyperthermia. Hyperthermia occurs when the internal temperature of the body reaches a level several degrees above normal body temperature of 38° C (100° F). Effects of hyperthermia include: (1) Unawareness of impending danger. (2) Failure to perceive heat. (3) Failure to recognize the need to leave the spa. (4) Physical inability to exit the spa. (5) Fetal damage in pregnant women. (6) Unconsciousness resulting in danger of drowning. The use of alcohol, drugs, or medication can greatly increase the risk of fatal hyperthermia in hot tubs and spas.

WARNING - HEATER: The IntelliPool® automation control system is intended to control heaters with a high temperature limit switch(s) safety circuit ONLY. Failure to do so may cause property damage or personal injury.

WARNING - Do not use this product to control an automatic pool cover. Swimmers may become entrapped underneath the cover.

WARNING - For units intended for use in other than single-family dwellings, additional safety equipment might be required in order to be compliant with local regulations.

CAUTION - Except for remote controls, install components at a minimum of five 1.5m (5 ft) from the inside wall of the pool and spa.

CAUTION - This product is intended for use in swimming pool applications only.

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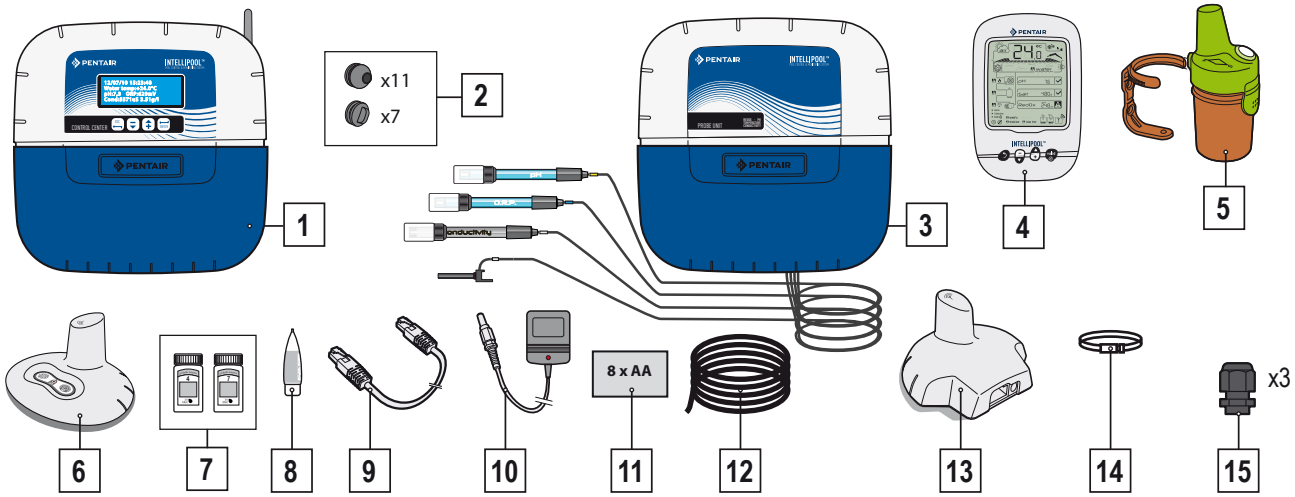
Contents of packaging

1 - Control center
2 - Grommets for watertightness of electrical connections
3 - Probe unit (and its 4 probes, delivered separately)
4 - Indoor wireless display
5 - Outdoor radio relay
6 - Outdoor remote control
7 - pH calibration solutions
8 - Silicon grease
9 - RJ45 cable
10 - Internet relay power supply
11 - 8 x AA batteries ProCell high temperature resistant
12 - IntelliComm® communication cable
13 - Internet relay
14 - Hose clamp 50/70 mm diameter for temperature sensor
15 - 12 mm diam. gland x3 for pH/ORP/Conduct probes



Introduction

Your new IntelliPool® system will bring you a fully automated management of your swimming pool system. It controls and manages the quality of the water and enables remote access to all comfort functions of your pool also for your poolbuilder; The result is a safer pool environment.
IntelliPool® will also generate substantial savings in operating your pool. Its unique control of the IntelliFlo® variable speed pumps guarantees the lowest possible power consumption while maintaining optimum filtration and water quality. Savings up to 90% can be achieved. The automatic control also minimizes the use of chemicals and will extend the life of a salt chlorinator.
IntelliPool® will furthermore adapt filtration, desinfection and other pool functions when the pool is covered.
What you will appreciate the most about IntelliPool® will be the increased convenience in using your pool. Controlling lights, heating and filtration can be done everywhere anytime using any smartphone or tablet PC. Automatic backwash is possible using a specific backwash valve on the filter.

IntelliPool® uses precision sensors and controls. Please follow the recommendations as described in this manual and use professional assistance for the installation of your system.

This way the only thing left is to sit back and enjoy your pool !

IntelliPool® features

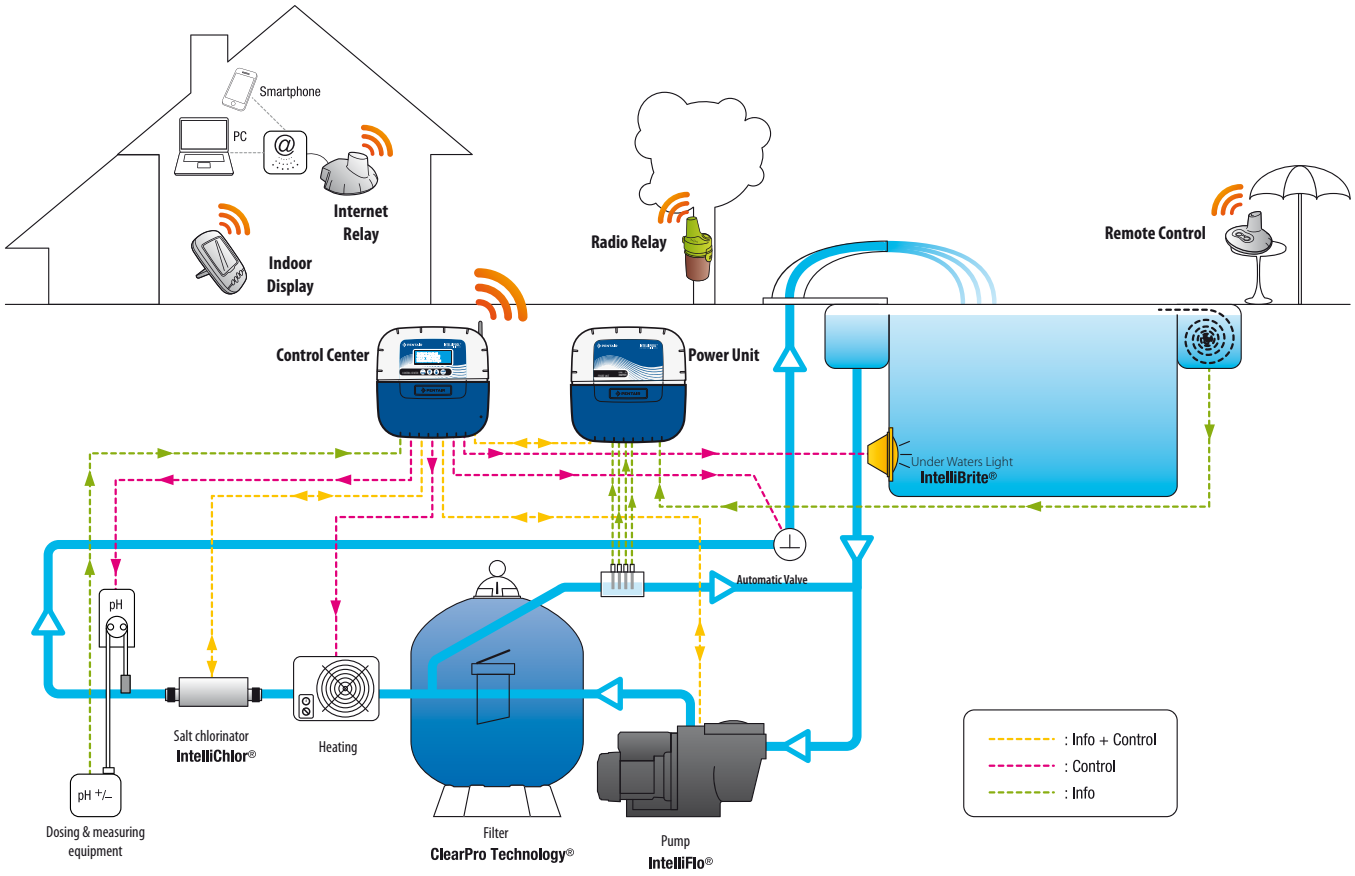
IntelliPool® manage the variations speed and operating schedule of IntelliFlo® depending on: Water temperature / Position of the pool cover / Specifics features (water falls, heating, IntelliChlor)
- Optimalisation IntelliFlo®
- Automatic ON/OFF / Schedule mode
- Disinfection based on ORP (Redox) measure
- Supervision and pH dosage (pH+ or pH-) including empty tank information
- Conductivity measure to inform salt concentration
- Heating piloting and temperature setting
- Lighting ON/OFF, schedule mode and IntelliBrite color choice

Auxilliary output :
- Automatic backwash (with push/pull valve)
- Water feature (with a second pump or 3 way valve)
- ON/OFF , schedule mode, timer

All these features are both accesible directly on IntelliPool® or on smartphone / tablet

General operation

The Probe unit located in the technical room collects information on water quality and communicates them to the Control center. Also situated in the technical room, the Control center activates the different pool functions. For IntelliFlo® and IntelliChlor® this information is sent using an RS485 bus. This way IntelliPool® also retrieves information and feedback from IntelliPool® and IntelliChlor®. Using a proprietary wireless protocol the control center sends and receives information and commands from the other system components. The Internet relay allows remote access to the system using PC, tablet or smartphone. The Indoor display informs the pool owner on the pool's main parameters, while the Outdoor remote control enables activation of lights and a water feature from the side of the pool. The Radio relay assures optimum radio communication between the components while at the same time collecting ambient air temperature. In this setup the system contains all the necessary input and control to assure a trouble free pool environment.

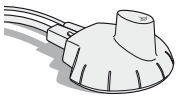


Specific IntelliFlo® Settings for VSD drives

IntelliFlo® VS and VF do not require specific settings on the pump itself. For IntelliFlo® VSD however make sure to:

- disable the antifreeze function in the pump
- set the miminum and maximum speed to the same values as in the IntelliPool® menu in order to obtain similar protection when operating the pump manually.
- determine if you want the priming function to be activated. Consult the VSD manual on this feature. When enabled on the pump, priming setting as determined on the pump drive wil become active. Please note this can lead to unwanted results in combination with water features!

Caution: IntelliPool® will always control the pumps keypad; it is not possible to stop the pump from the keypad while IntelliPool® is active. Use IntelliPool® or in case of emergency the pump's main power switch to stop the pump.



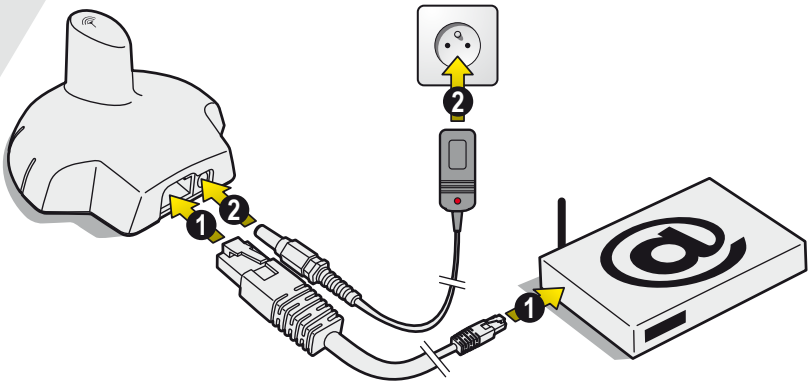
Internet relay - Your pool accessible 24/24 on www.intellipool.eu

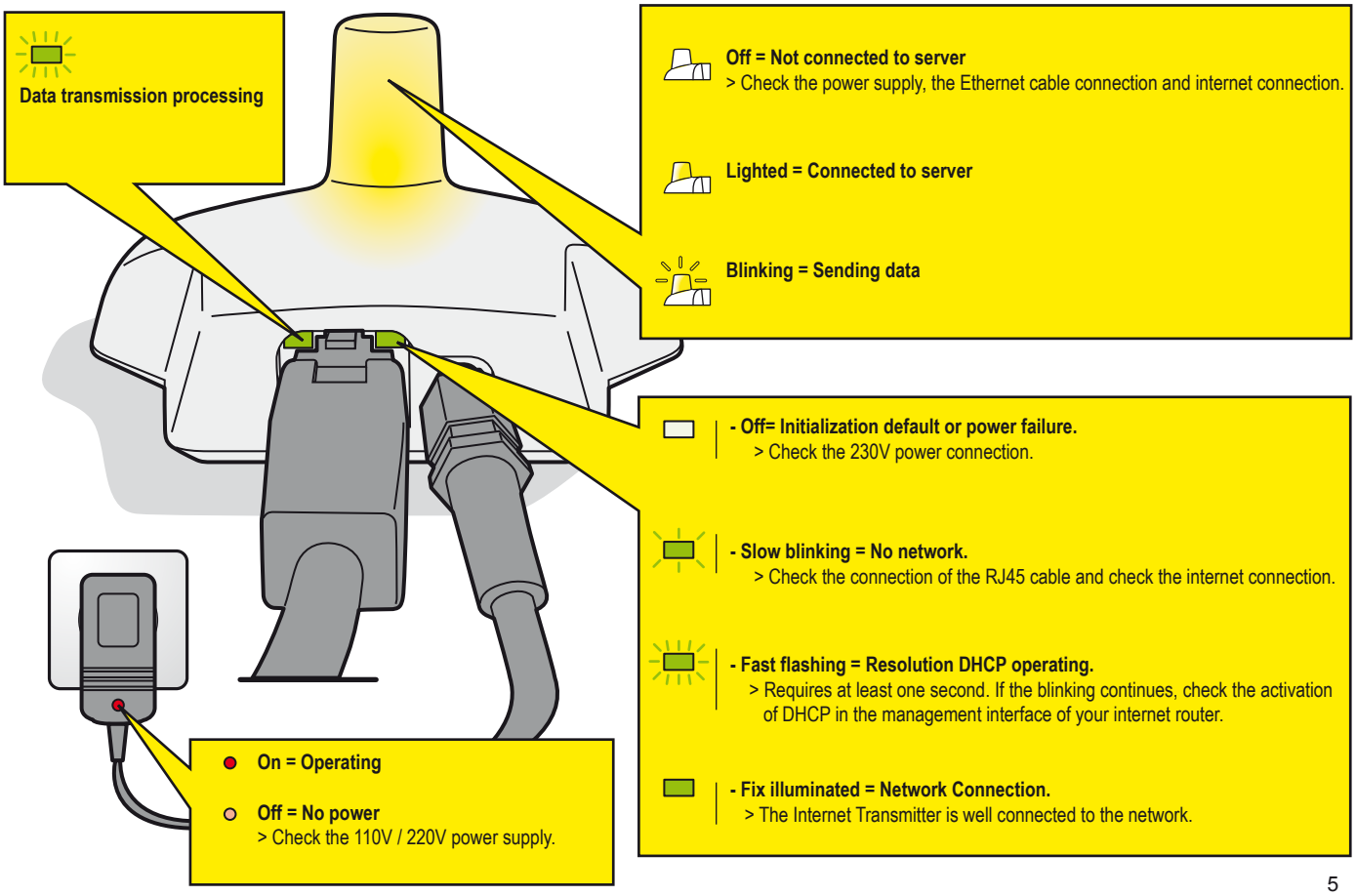
The internet relay allows internet to keep in touch with your pool even when your home computer is shut down. What ever your type of computer (PC or Mac) you have access to your data in real time and can also work on settings and controls.
Simply plug the internet relay to your internet router and the connection to the server Pentair is automatic. After you create your free account on www.intellipool.eu, you connect to your system in few minutes. Commands to Control center ordered via internet are effective in seconds.

1 - Connect the Ethernet cable to the Ethernet port of your internet relay. Then connect the other end of Ethernet cable to an available Ethernet port on your router or ADSL modem. The Ethernet cable can be replaced by an equivalent cable with a maximum length of 100m. If you do not have a free Ethernet port on your router or ADSL modem, you should get an Ethernet switch to connect your system permanently.
2 - Connect the power cord and connect the power transformer to an AC outlet.

The internet relay is automatiquely configured than internet provided that the DHCP server of your internet router is enabled (in the vast majority of cases, the DHCP server is enabled by default when you install your internet router). This function is accessible via the menu system of your Internet router, refer to your Internet service provider for more details.

Verify the correct operation of the internet relay using the led indicator on the device (see illustration below).

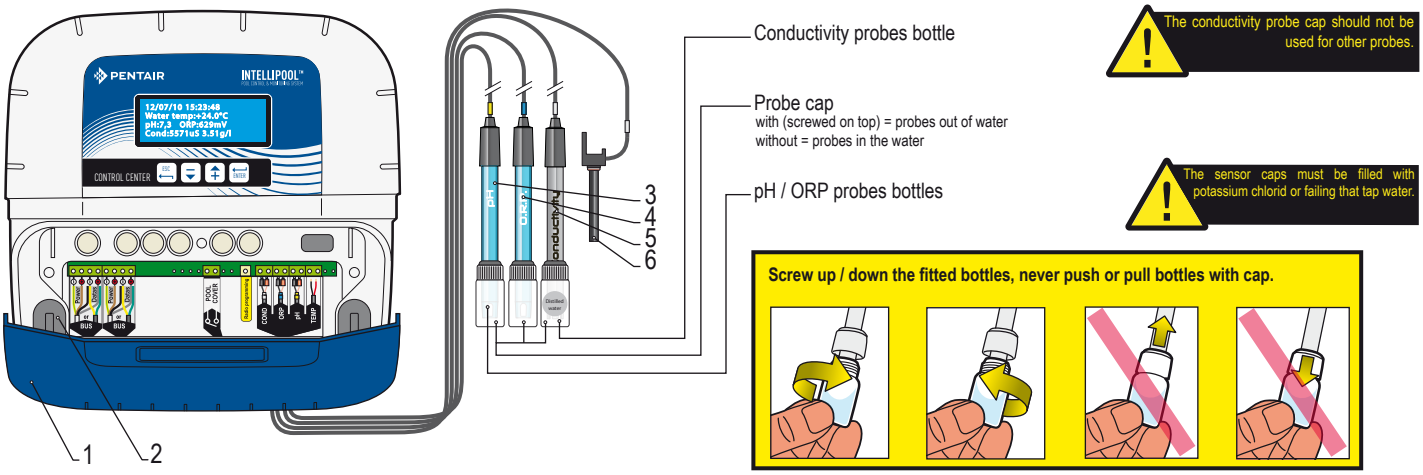




Probe unit

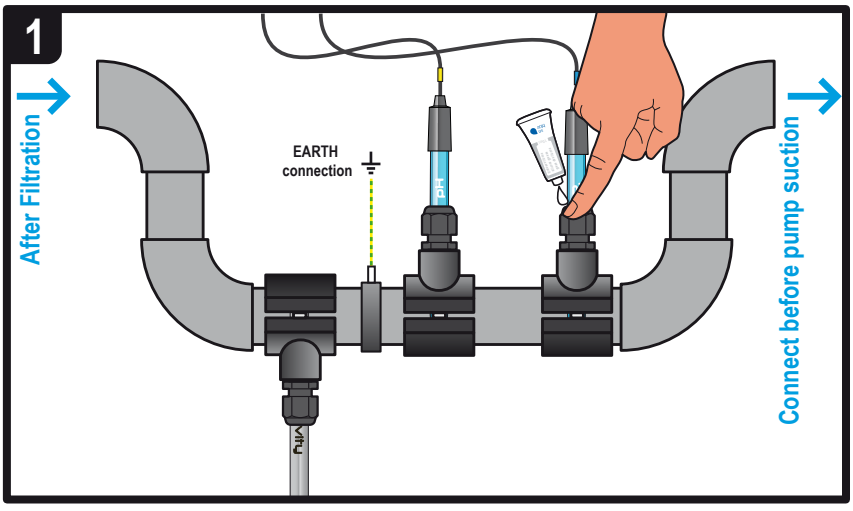
The Probe unit collects pH, ORP (RedOx), conductivity and water temperature. These informations are sent to the Control center. The cable length of the pH and ORP probes is deliberately limited to 50 cm for good readability.

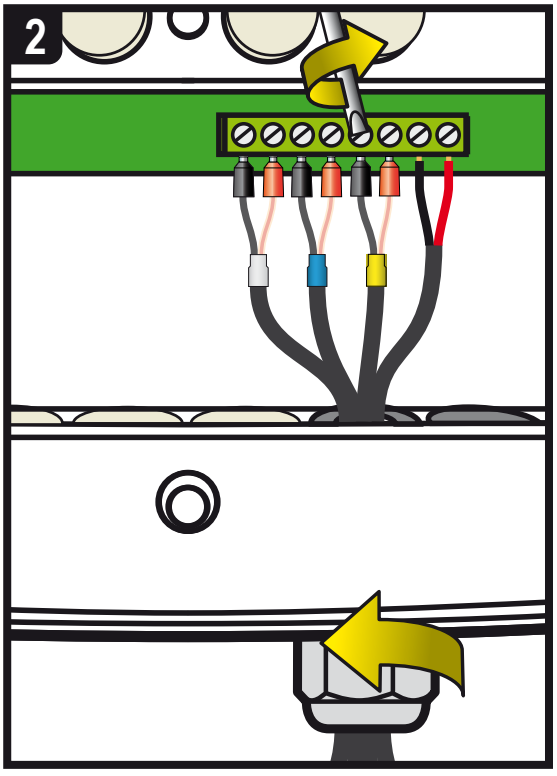
1 : Rubber cover (insulation from acid fumes and humidity)
2 : Screw cover (insulation acid fumes and moisture circulating through the screw hole)
3 : pH probe (0.5m lenght cable)
4 : ORP probe (0.5m lenght cable)
5 : Conductivity probe (0.9m lenght cable)
6 : Water temperature probe (2m lenght cable)



Install and connect probes

The Probe unit need to be installed close to the by-pass (pH & ORP probes cable is 50cm long)
1 - On a by-pass with siphon, in an analyse chamber, in a bol or 50/63mm PVC, install pH & ORP probes head up, Conductivity probe head down. Water temperature sensor need to be installed outside the bypass with the hope clamp provided (see detail next page).
2 - Pass the cables through the white gland, connect the cables following marks and screw the white gland.

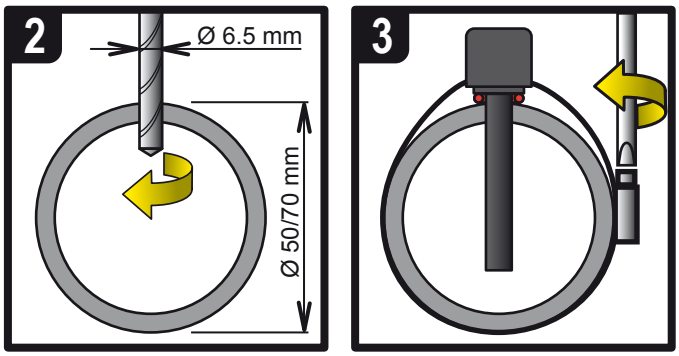


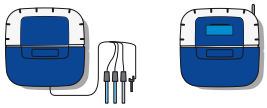


The lifetime of the probes (depending on usage conditions) is about 2 years for the pH probe, 5 years for the ORP probe and lifetime for conductivity sensors and temperature. Only Pentair probes are compatible and guarantee the proper functioning of IntelliPool®.
IT IS IMPERATIVE TO ISOLATE THE BYPASS BY CLOSING BOTH VALVES BEFORE WANTING TO CHANGE A PROBE UNDER THREAT OF FLOODING.

Water temperature probe installation

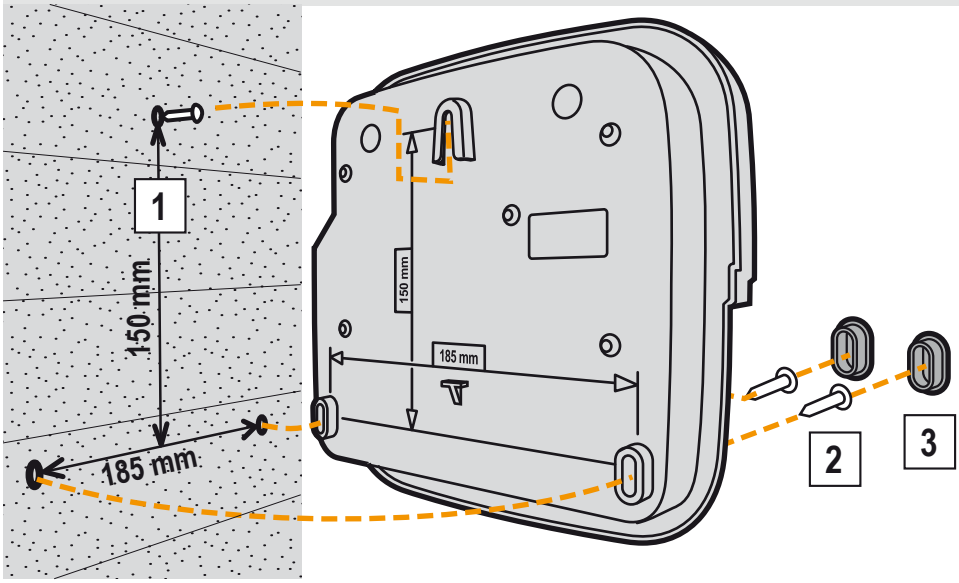
1 - The water temperature probe can be installed outside the by pass before the pump filtration or filter inlet for a better reading.
2 - Drill a 6.5mm diameter (1/4 inch) in the PVC (50 or 63mm) piping
3 - Place the metal hose clamp over the sensor and tighten.

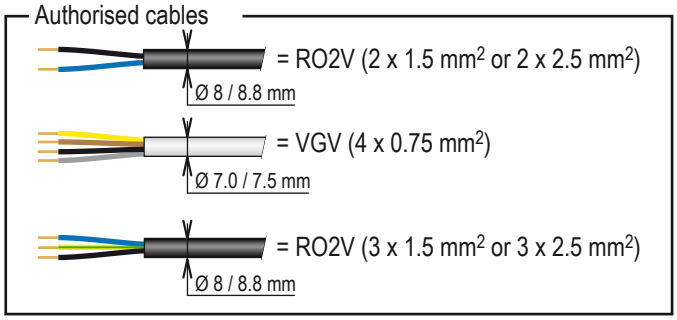




Attach the Control center / Probe unit on the wall

Drill three holes equipped with plugs as shown below.
1 - Screw the top screws and hang the unit.
2 - Screw the 2 screws from the bottom.
3 - Install the 2 rubber insulation covers.





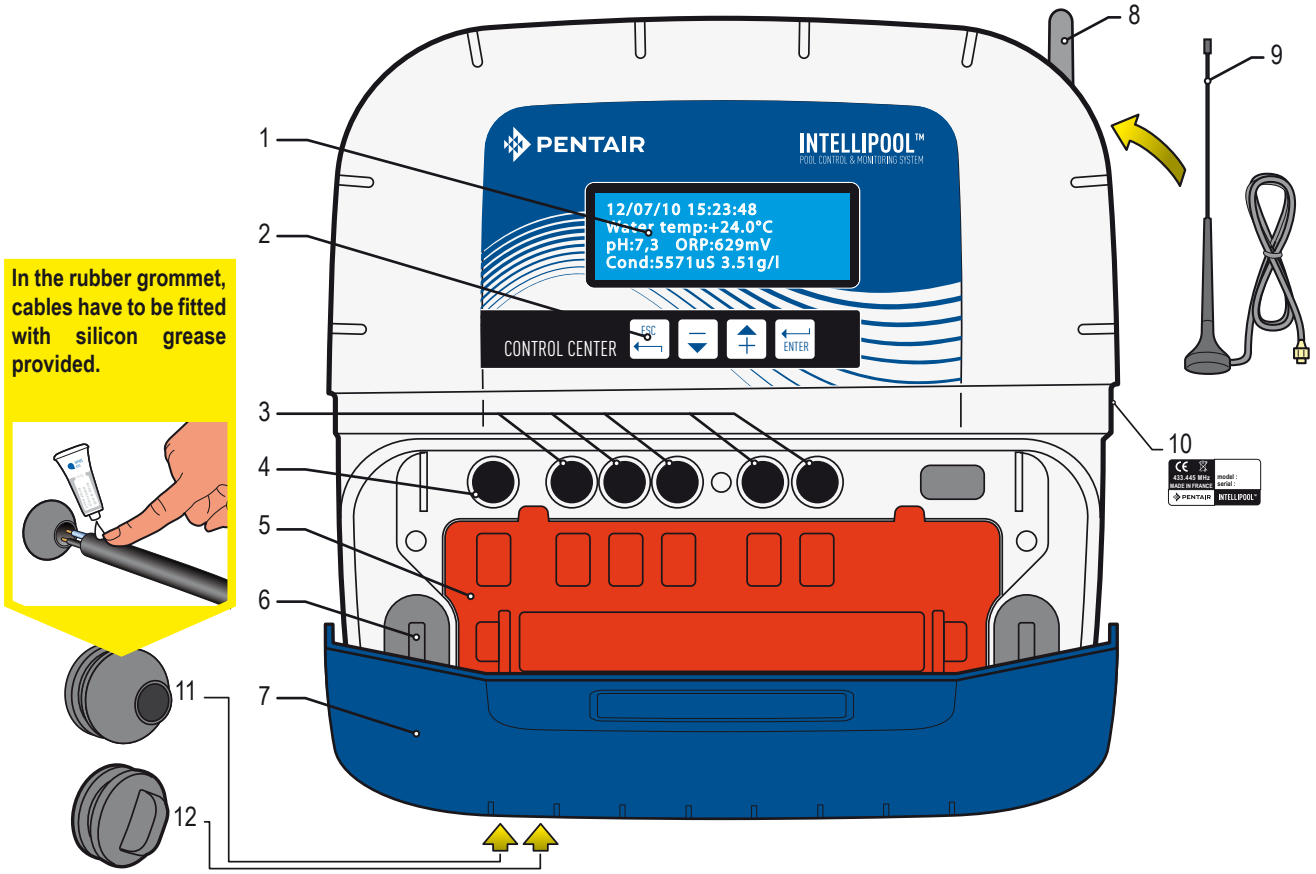
Probe unit and Control center location

The Probe unit needs to be positioned in close proximity to the by pass carrying the probes.
The Control center need to be positionned to be able to easely reach the keypad in order to adjust settings.

Control center

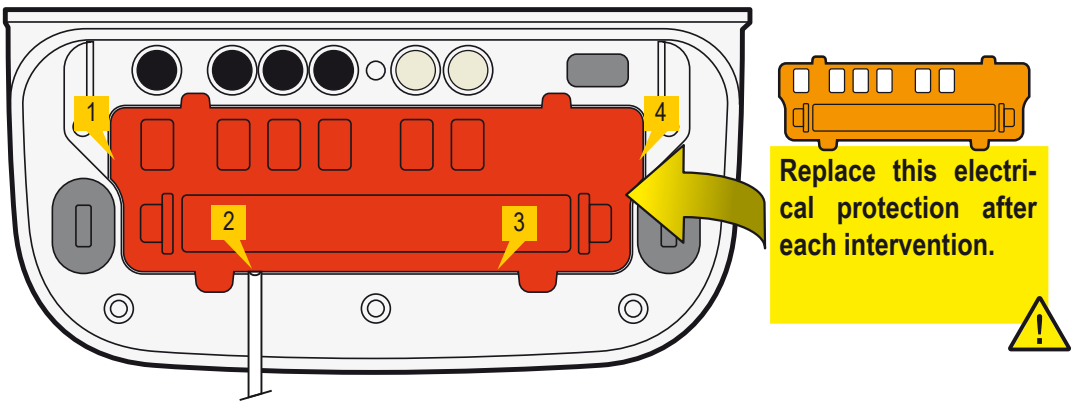
It is the brain of the system. It automatically calculates and controls the operating time of each connected device. It receives orders from the remote control or via the Internet and activates specific devices. The activity is retained in memory for 64 days (available for the user).

1: Screen (4 x 20 characters)
2 : Buttons (menu navigation)
3: Doors fuse (10A)
4 : Doors fuse (1A)
5: Connectors cover (removable with a screwdriver)
6 : Screw cover (protection against water ingress)
7: Elastomer cover (insulation acid fumes and moisture)
8 : Radio antenna
9 : Deported magnetic radio antenna (option) ref : INTP-5240
10 : Identification plate
11 : Multi cable grommet compatible for cable from diameter 7mm to 10mm, have to be fitted with silicon grease provided. Avoids any acid vapour or humidity entering the system
12 : Cap, closes a hole in case of non utilisation of an output, to be fitted with silicon grease provided. Avoids any acid vapour or humidity entering.



Remove the orange protection on Control center

To meet electrical codes, a snapfit security cover, unclipsable without tools, protects the electrical connectors.
> Place a flat screwdriver on the clips 2 and 3 while maintaining force on the cover to unclip.

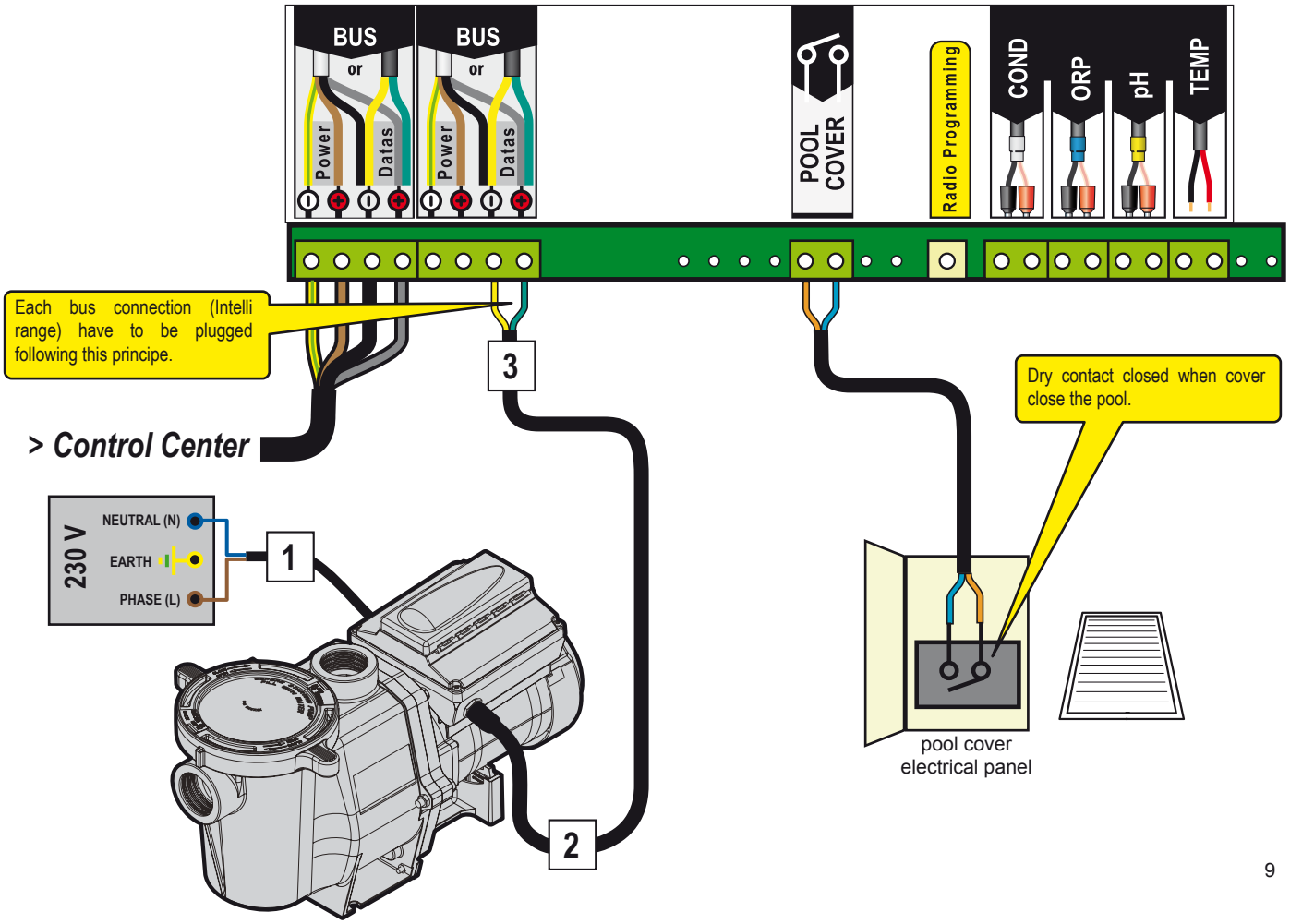


230V + Probe unit connection Control center

The Control center need to be placed near the electrical panel to optimise the electricals connections. Connect the 230V. **Engage the 230V only at the end of the electrical installation.** Connect bus cable on Datas and Power from Control center to Probe unit.

IntelliPool®, Control center on Probe unit and pool cover connection

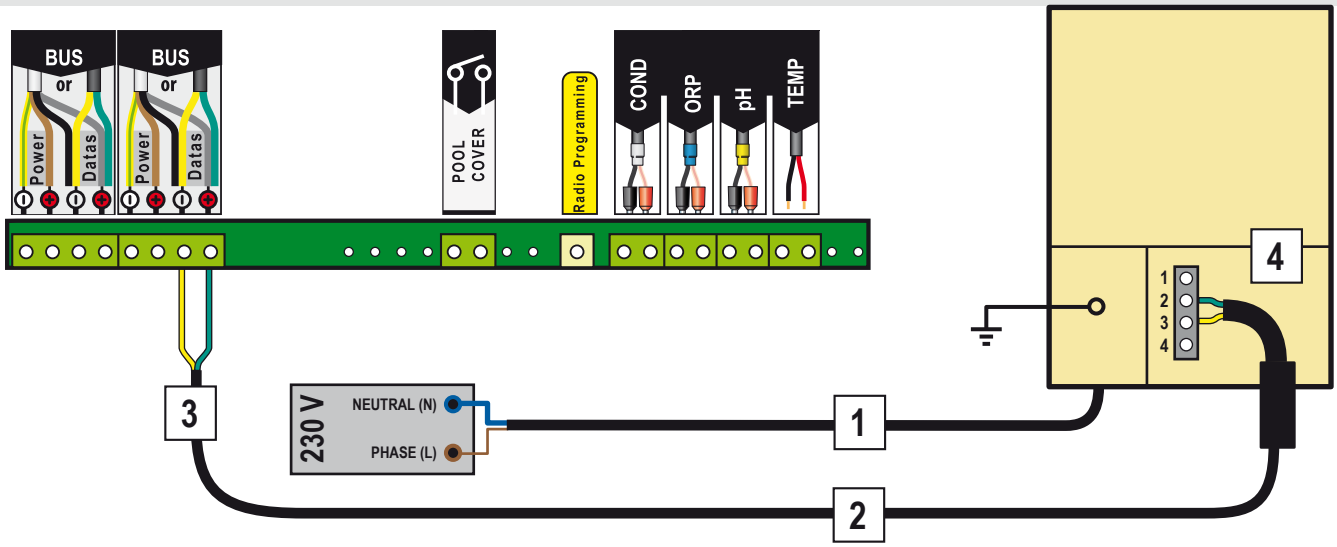
1 - Connect the 220V.
2 - Connect the IntelliFlo® cable ref 350122 / long 15m provided with the IntelliPool®.
3 - Connect the green cable on Datas+ and connect the yellow cable on Datas-.



Desinfectant connection

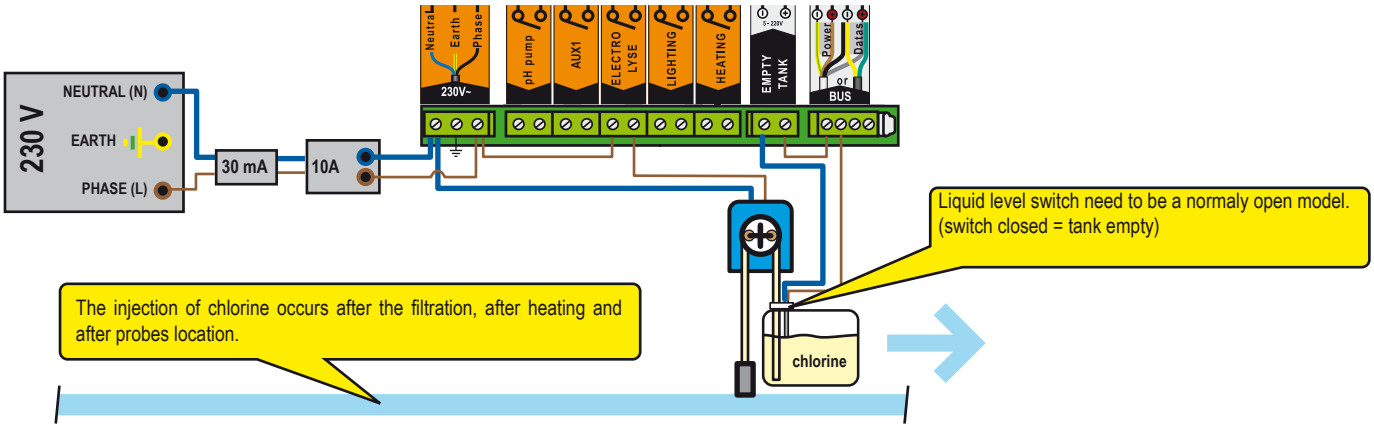
IntelliChlor® salt chlorinator connection inside the Probe unit

1 - Connect the 230V.
2 - Connect the IntelliFlo cable ref 350122 / long 15m provided withg the IntelliPool®.
3 - Connect the green cable on Datas+ and connect the yellow cable on Datas-.
4 - Connect the green cable on the terminal block 2 and the yellow cable on the terminal block 3 of the IntelliChlor® Power center.



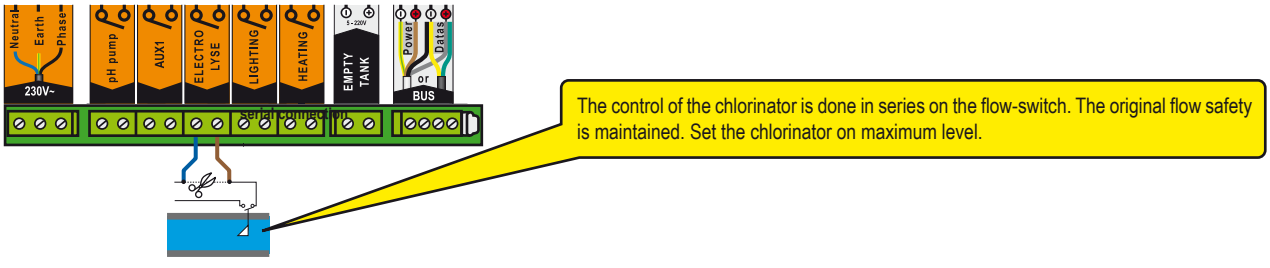
Chlorine pump connection inside the Control center

1 - Connect the chlorine pump and the chlorine level sensor as descrided bellow. Select «other» in settings menu/install/other, see p16.



Alternative salt chlorinator connection inside the Control center

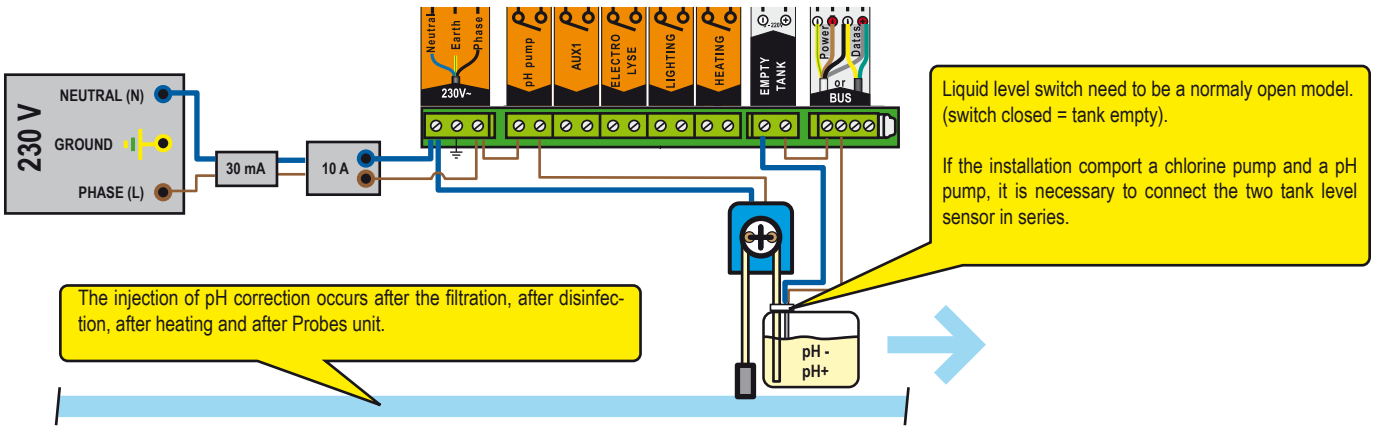
1 - Connect a classical electrolysis as descrided bellow.



ELECTROLYSIS FLOW-SWITCH

pH pump connection on Control center

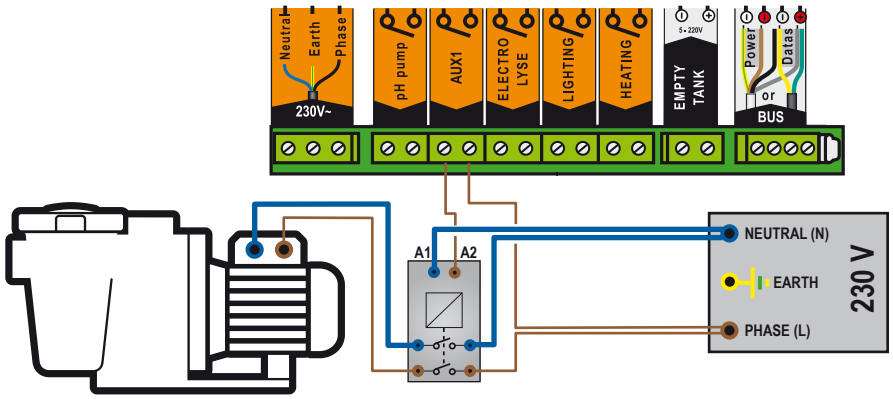
1 - Connect the pH pump and the pH corrector level sensor as desbrided below.



AUX1 connection (fountain, swim-jet, water fall, garden lighting...)

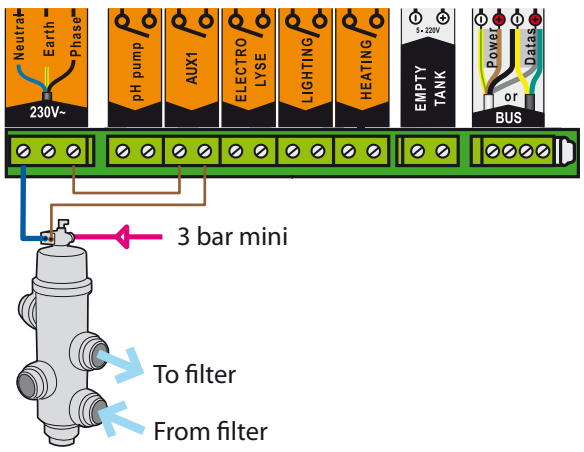
Accessory water pump connection on Control center

1 - Connect the second water pump as desbrided bellow on AUX1 output. Usable for a fountain, a swim jet, water fall...



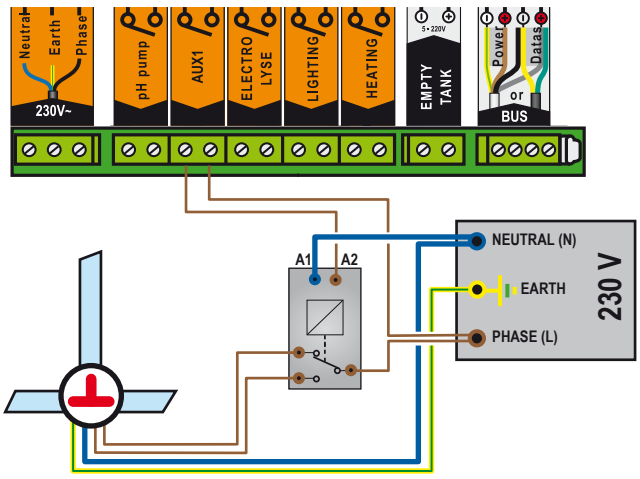
Pneumatic push/pull valve (for automatic back wash) connection on Control center

1 - Connect the air push/pull valve as desbrided bellow on AUX1 output.



3 way valve (for animation) connection on Control center

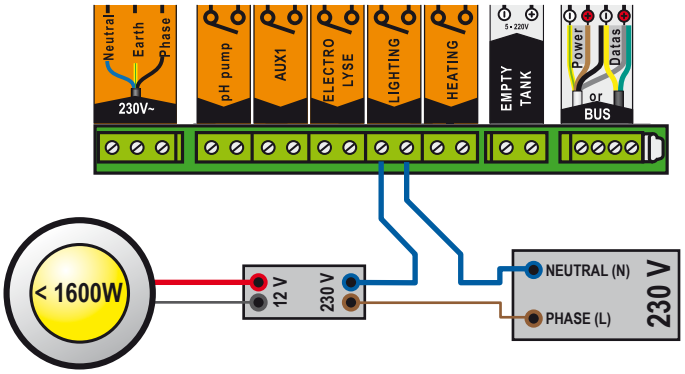
1 - Connect the 3 way valve as desbrided bellow on AUX1 output.



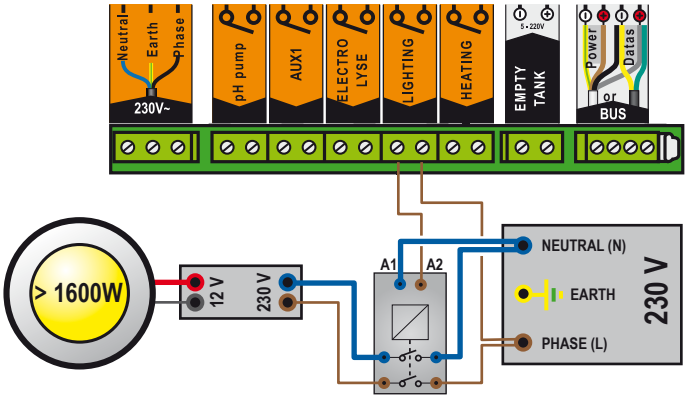
Lighting connection on Control Center

1 - Connect the lighting as descrided bellow depending the power of the lighting.

Total lighting power is less than 1600 W



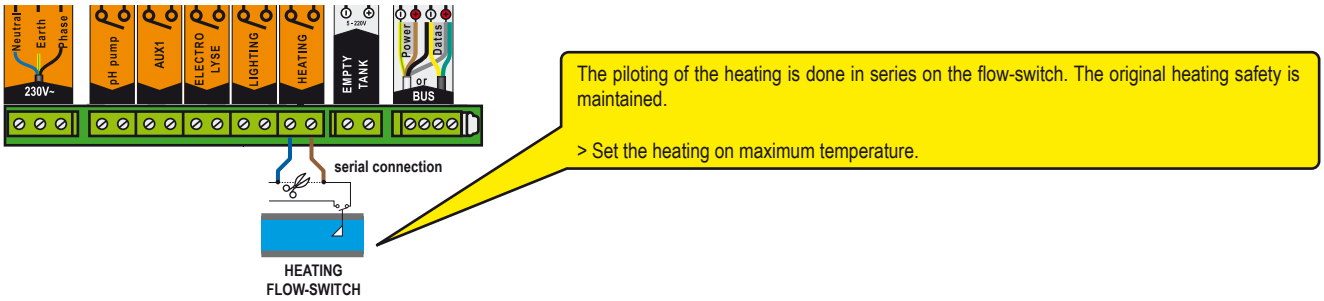
Total lighting power is more than 1600 W



Heater connection on Control center

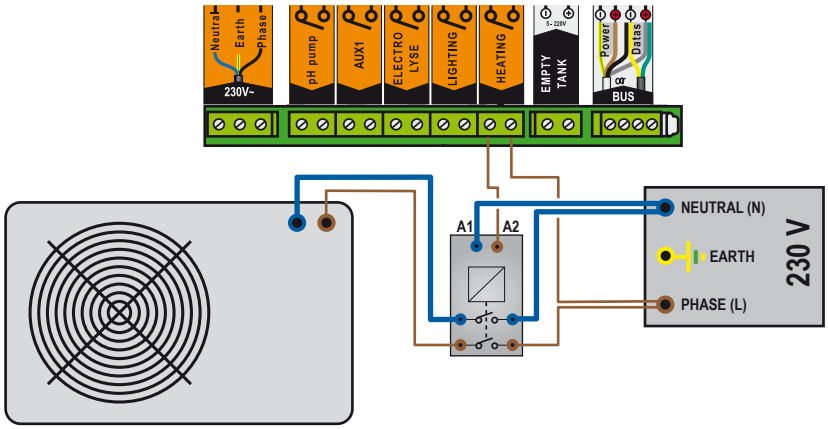
Connection on the heater flow switch

1 - Connect the heating pump as desbrided bellow.
Make sure the heater is equipped with a built-in overheating protection!



Connection through a contactor

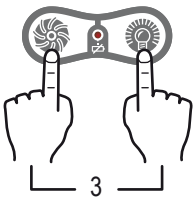
1 - Connect the heating pump as descrided bellow.

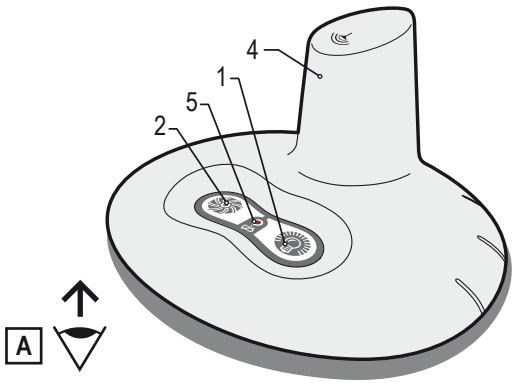


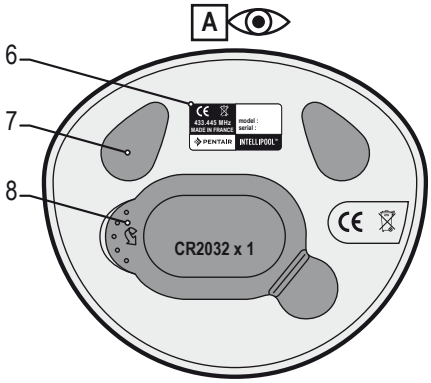
Outdoor remote control

Designed to drive an auxiliary output and lighting from the edge of the pool, it is waterproof and floats if dropped in the pool. As the radio network consists of several elements, it is normal for the start of a function to take a few seconds (1 to 10s depending on the configuration).

1 : Short press = button lighting ON / OFF
2 : Short press = button Aux1 ON-OFF, long press (>3s) = back wash (if present)
3 : (Simultaneous 3s) = Function SHOCK (24H forced filtration and desinfection, this feature can be useful after a strong activity in the pool).
4 : Radio antenna
5 : 3s LED blinking (after pressing) = Low battery cell
6 : Serial number identification plate
7 : Anti slip rubber foot
8 : Battery hatch (button cell CR2032 supplied - Pull tab to open)



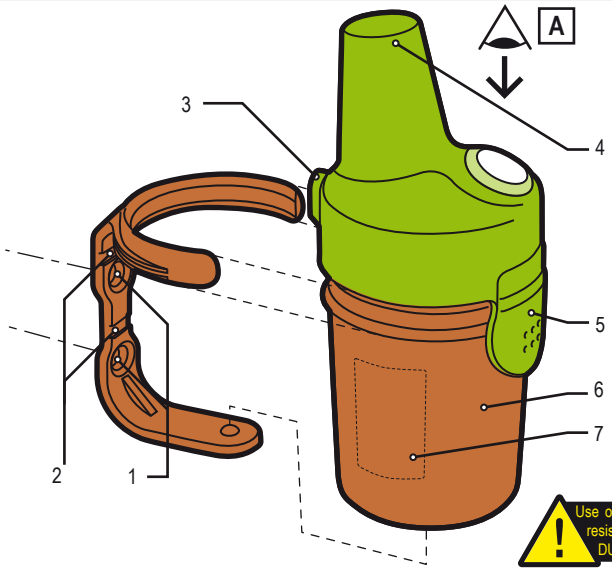


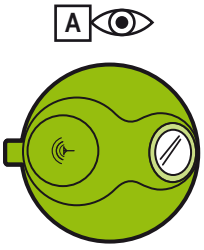


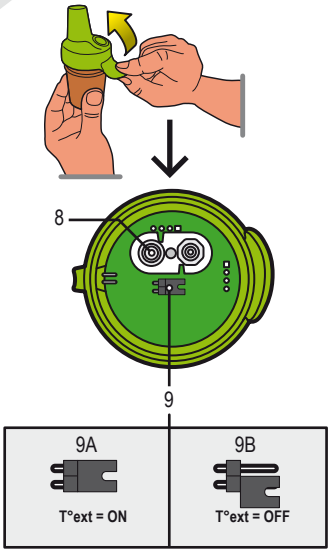
Radio relay

This element is necessary to relay the radio waves between the equipment room and home. It measures the outside temperature. With its shapes and natural colors, designed for outdoor use, it takes place in the garden (or plant in a clump on his clip screwed to a wall). The battery life is approximately 1 year. In case of long distance or garden with great relief, it is possible to add one or more Radio relay (see p31).

1 : Wall clip fixing holes
2 : Wall clip trap grooves
3 : Air temperature sensor
4 : Radio antenna
5 : Battery access tab
6 : Pot
7 : Identification plate (inside)
8 : Battery holder contacts
9 : Jump position
9A : Air temperature is transmitted
9B : Air temperature is not transmitted (required for adding a radio relay, see p31).



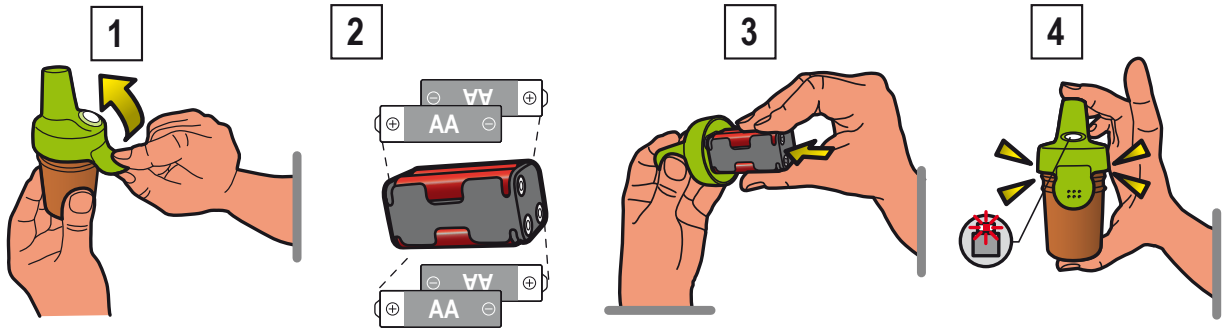




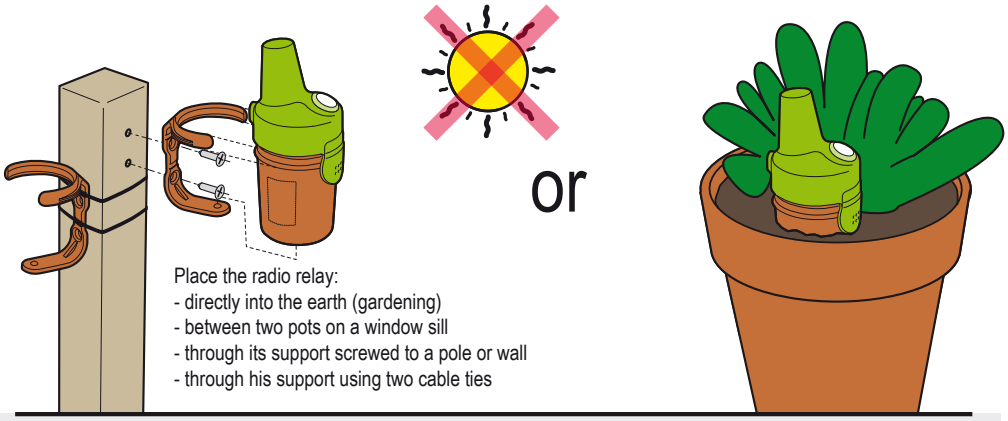
Radio relay installation

Outdoor radio relay may be subjected to very high heat. It is necessary to use alkaline batteries of high quality resistant to temperatures of +70 ° C (ex DURACELL PROCELL).

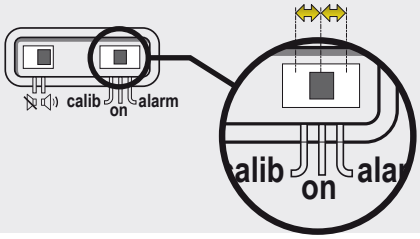
1 - Take off the pot by pulling the tab.
2 - Install the 4 AA batteries (supplied).
3 - Reconnect the battery holder.
4 - The red LED flashes. Put the container's cover back on.



The Radio relay ensures the connection between the equipment room (Control center) and the house (Indoor display and Internet relay). It should be placed vertically (wall, pole) and away from any metal object (fence iron, zinc gutter) and not directly exposed to the sun to ensure a reliable air temperature measurement.
Perform tests (reading the radio signal strength on the display, move the switch CALIB back of the indoor display to refresh the information) before fixing it permanently. For very large distance between the pool and the house, it is possible to add an extra Radio relay (option).



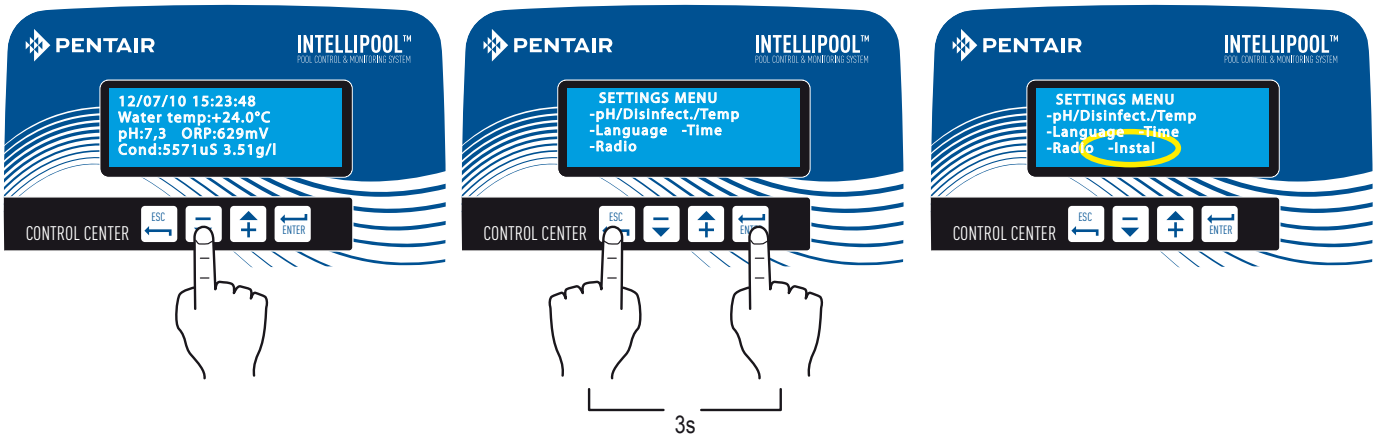
Place the radio relay:
- directly into the earth (gardening)
- between two pots on a window sill
- through its support screwed to a pole or wall
- through his support using two cable ties



To refresh the display of data, positioning the switch (on the back of the Indoor Display) to "CALIB" then back "ON". After 10s, the radio signal strength at each test positioning relay radio is refreshed.

Installation restricted menu for access to specific settings

The settings, accessible only by Installation Menu are listed in ***Bold Italic***, should be changed only by a qualified pool professional.
1 : In Settings menu, press simultaneously *ESC* & *ENTER* for 3 seconds. The submenu *Instal* appears bottom right of the screen (automatically removed after 120 minutes).



Menu Settings

- pH/Disinfect./Temp
  - pH
    - Auto / Off
    - ***pH+/pH- define***
    - Set point
    - ***Priming***
  - Disinfectant
    - Auto / Off
    - Set point
    - ***Priming***
  - Temperature
    - Auto / Off
    - Setpoint
- Units (language + choice °F /°C)
- Time
- Radio
  - Register Equipment
  - Register Remote Control
  - Reset Remote Control

Menu Lighting

- Manuel / Program / Off
- Couleur : 0
- Programing settings

Menu Filtration

- Auto / On / Off / Program
- Shock
- Program settings
- Cleaning
- Filtration operarion time slot

Menu Aux1 (invisible if AUX1 is programed in auto back wash)

- Manual / Horloge / Off
- Timer: 10'
- Timer setting

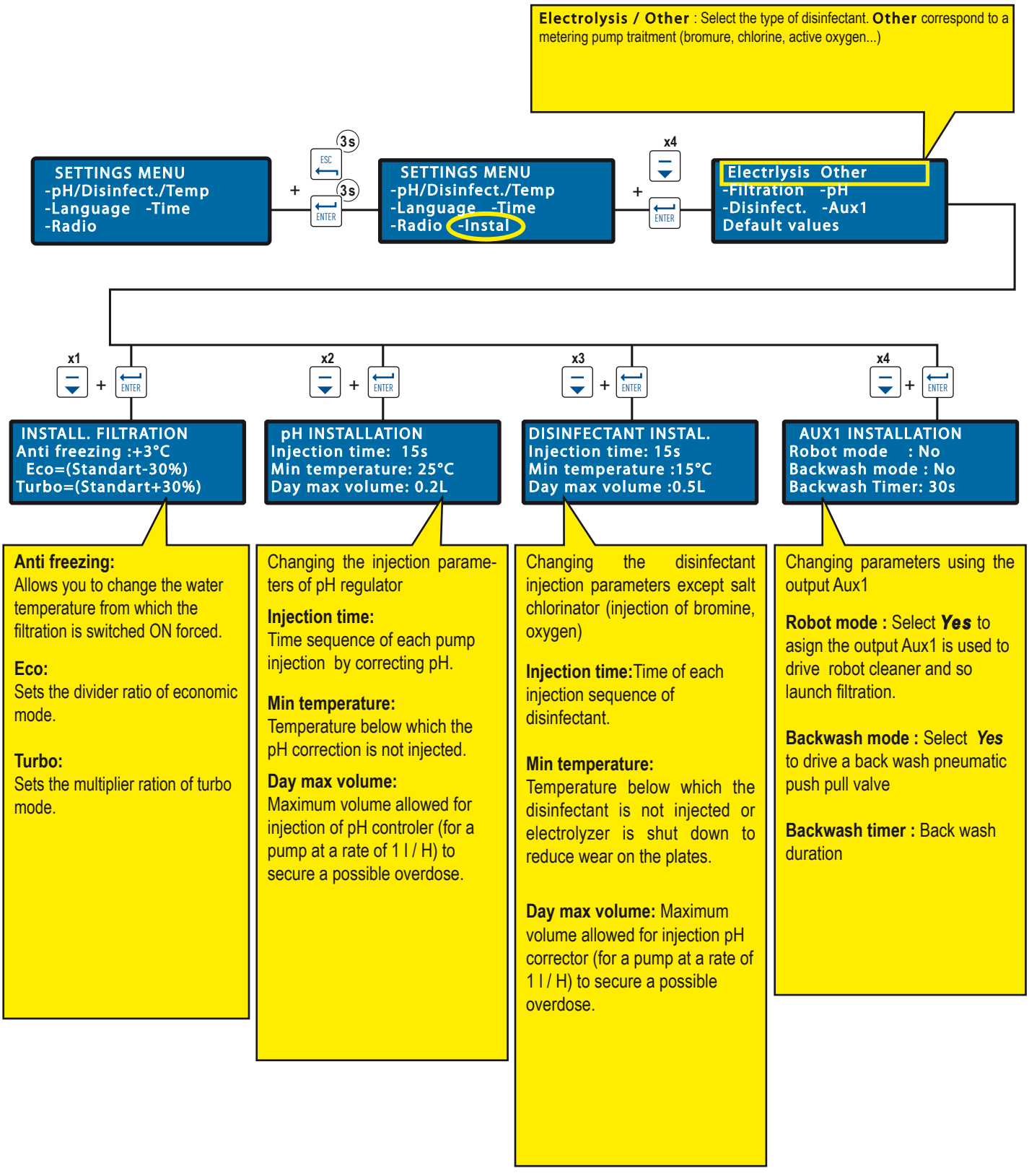
Menu Install

- Electrolysis / Other
- Filtration
  - Antifreeze : + 3C
  - Eco=(Standard- 30 %)
  - Turbo=(Standard+ 30%)
- pH
  - Injection time: 15 s
  - Min temperature : 16C
  - Volume days Max: 0,2 L
- Disinfect.
  - Injection time : 15 s
  - Minimal temperature : 14C
  - Volume days Max: 0,5 L
- Aux1
  - Robot mode: No
  - Backwash mode : Yes
  - Backwash duration : 10 sec
- Default values

The adjustment speeds of IntelliFlo are accessible via the *IntelliFlo menu* on www.intellipool.eu

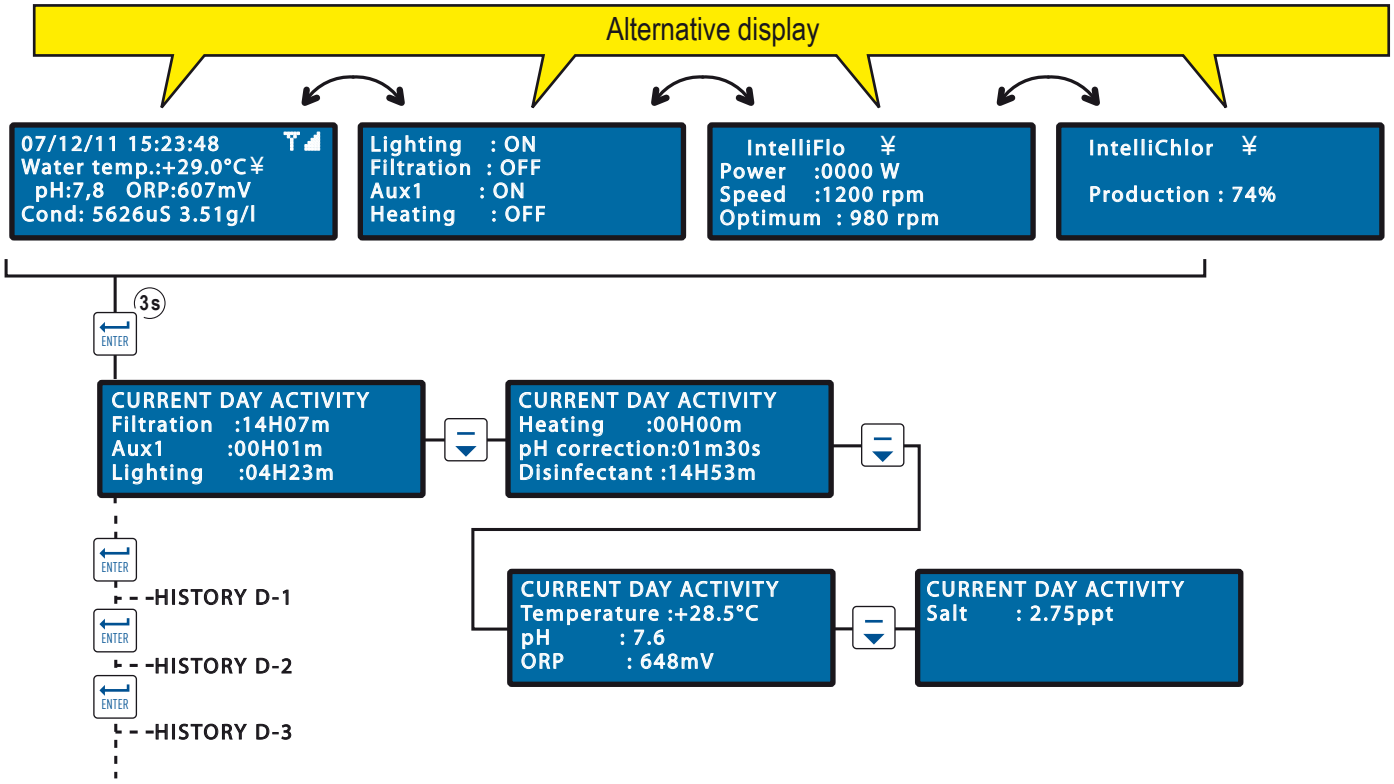
Customizing settings, (restricted)

This menu allows the installer to customize the settings according to the specifics of the equipment. Changing these settings can have serious consequences on the pool. It is advisable to check the settings changed by a professional. Access to the SETUP MENU and then press simultaneously *ESC* & *ENTER* for 3 seconds. The submenu *Instal* appears bottom right of the screen (automatically removed after 120 minutes).



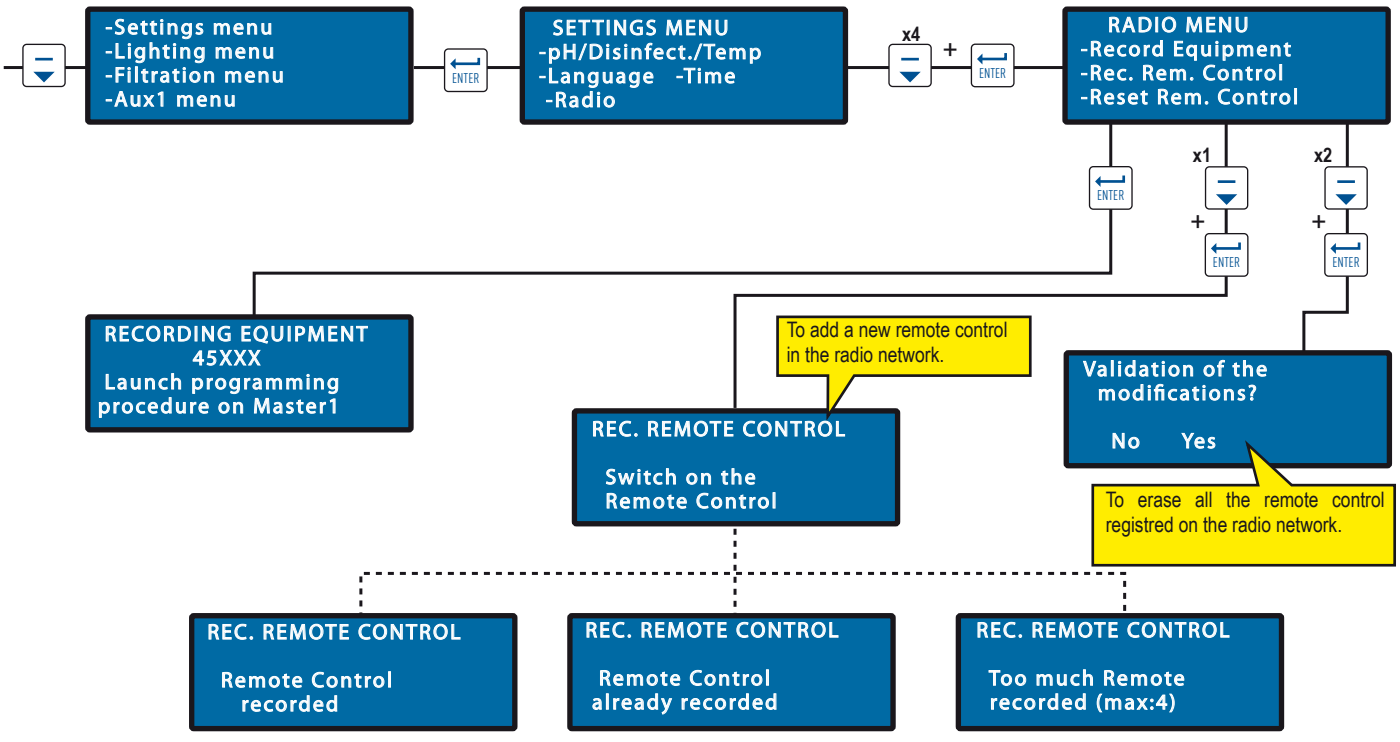
Current values & status / previous days activities

This menu shows the actual values, and values of the >previous 64 days, of each parameter and running duration of each feature connected (daily average).



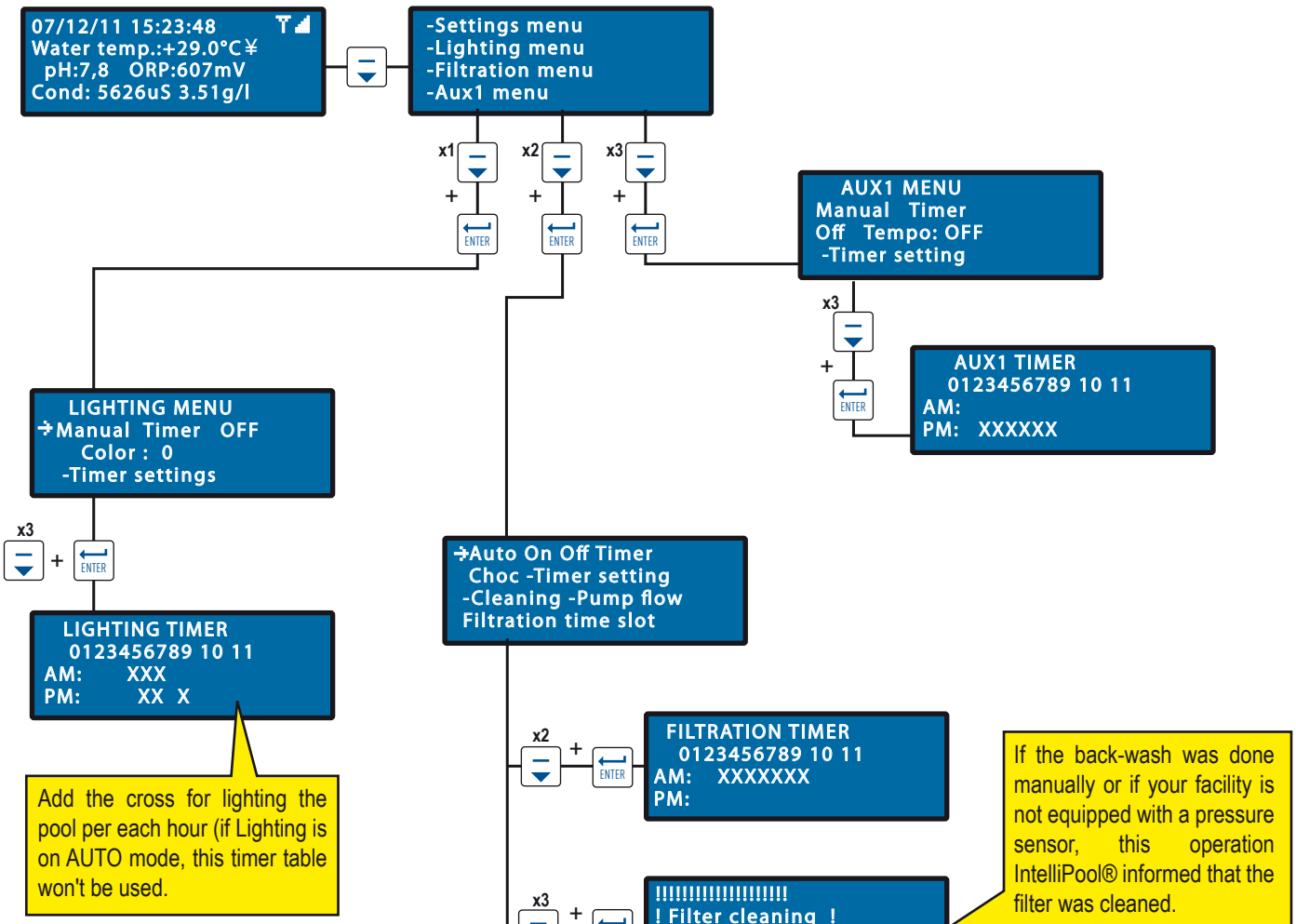
Radio menus

Meaning of the various Radio menus.



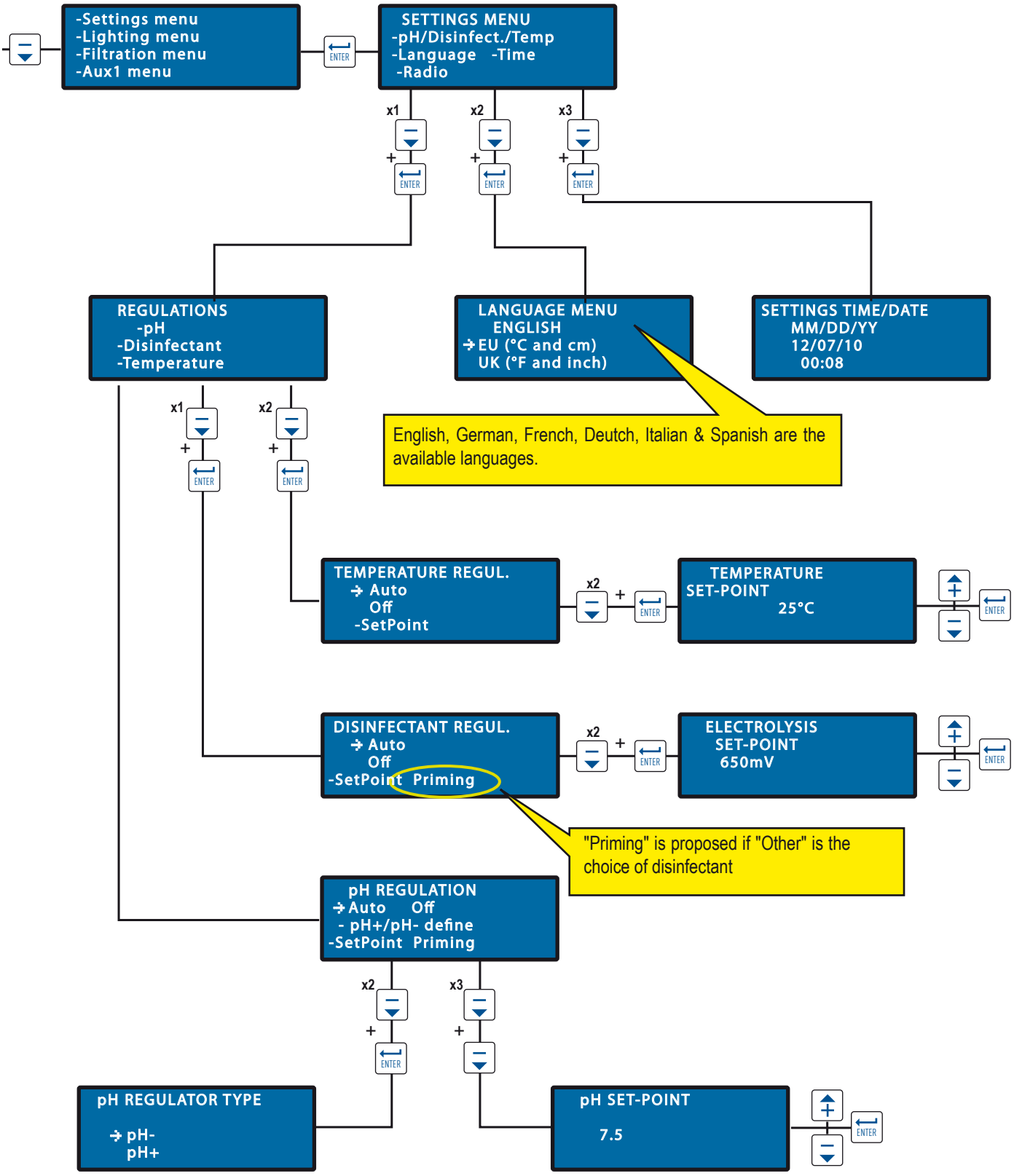
Lighting / filtration / AUX1 menus

This menu shows settings of filtration, lighting and AUX1 menu.



Settings menu overview : pH-disinfectant-temperature setpoints / language / time menus

IntelliPool is factory pre-setted. These settings are changeable. If it is recommended to move, a qualified pool professional change these setting.



Alert menus

Meaning of the various menus alerts.

You try to switch ON the lighting but in lighting menu, the position is OFF.

Control center need to use more pH corrector than allowed in the "Volume Days Max" menu (factory pre-setted at 0.5l / day). Check the disinfectant tank level.

The Control center is not connected anymore to the radio network. Check the antenna or the radio relay status (position, batteries). A deported antenna is available in option.

Control center needs to use more disinfectant than allowed in the "Volume Days Max" menu (factory pre-setted at 0.5l / day). Check the disinfectant tank level.

Check the connection of the BUS cable between the Probe unit and the conrol unit.

Make the calibration of the pH probe.

Nonfreezing mode is in action.
This message is just displayed for your information.

Internal Real Time Clock problem.
> Contact your dealer.

The filter need to be cleaned
> Make a back-wash.

pH minus or plus, depending choice, is empty
> Add some pH regulator in concerned tank.

Chlorine tank is empty
> Add some chlorine in concerned tank.

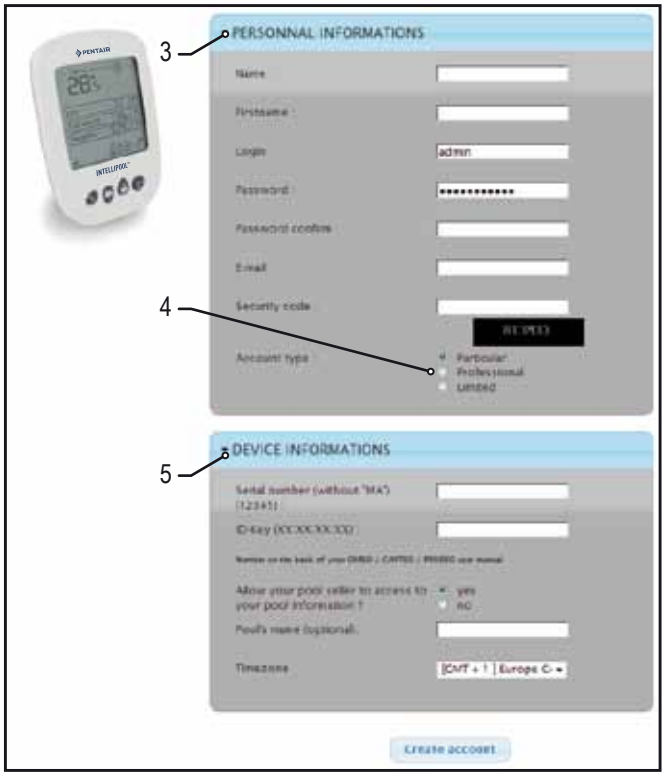
pH corrector or chlorine tank is empty
> Check and add the liquid in concerned tank.

Account connection / creation

For a remote access

1 - Log in on www.intellipool.eu.
2 - Click on *Create account.*
2 - Fill in the fields of the window *PERSONAL INFORMATION.*
4 - Type of Account: *Pool owner* is main private customer access limited for the main controls only, *professional account* is reserved for pool maintenance professionals.
5 - Fill in the fields of the window *DEVICES INFORMATIONS* :
    5.1 - Serial number : The serial number is on the second page of this user manual.It is also on the identification plates (the most accessible is the remote display (see p5), it is of 5 digits after the 2 letters. **Do not use the serial number of the internet transmitter or the Control Center.**
    5.2 - ID-Key : It is a unique security code certifying the device. It is on the last page of the cover of this user manual.
6 - Click on *Create account*. The account is created.
7 - To access your system, add the login and password you have created and click «connect».

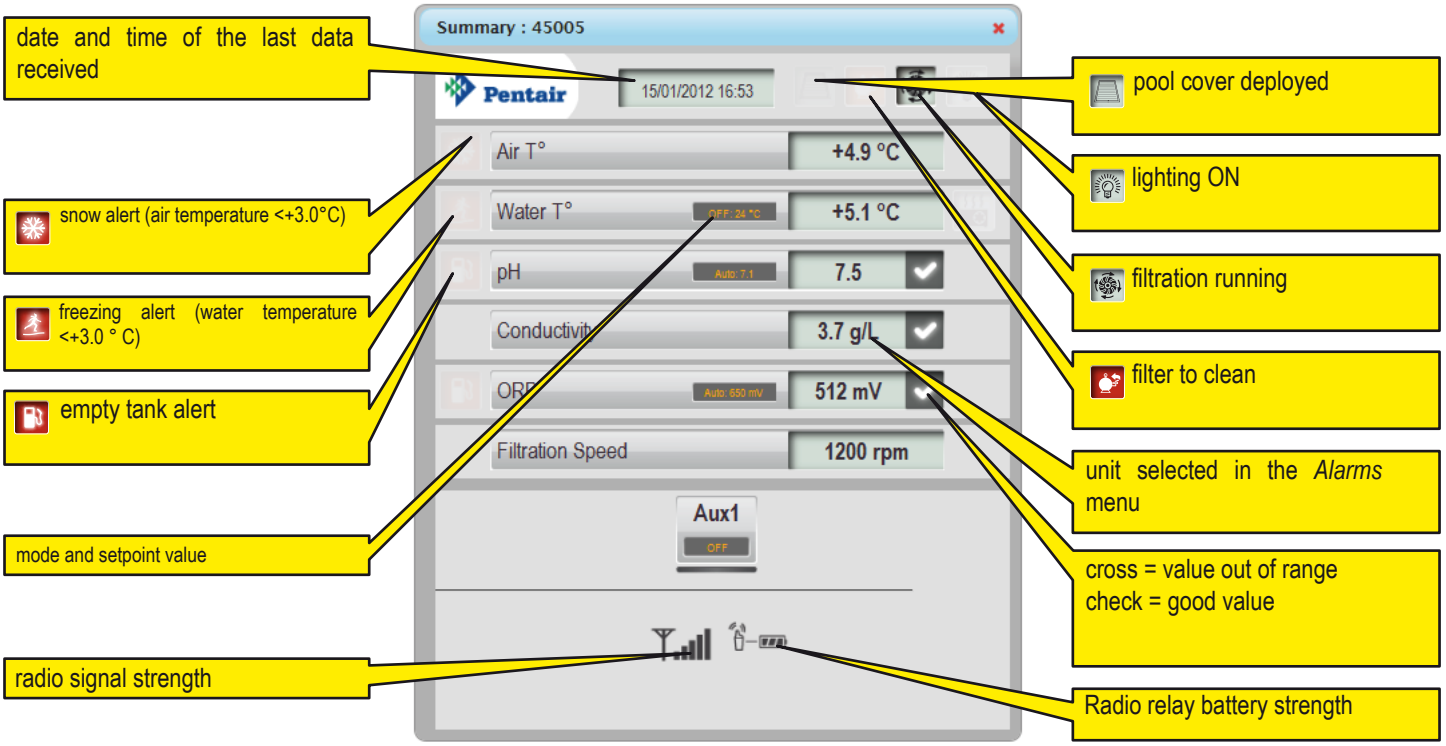
On www.intellipool.eu, create an account by filling the required fields.



Menus on www.intellipool.eu

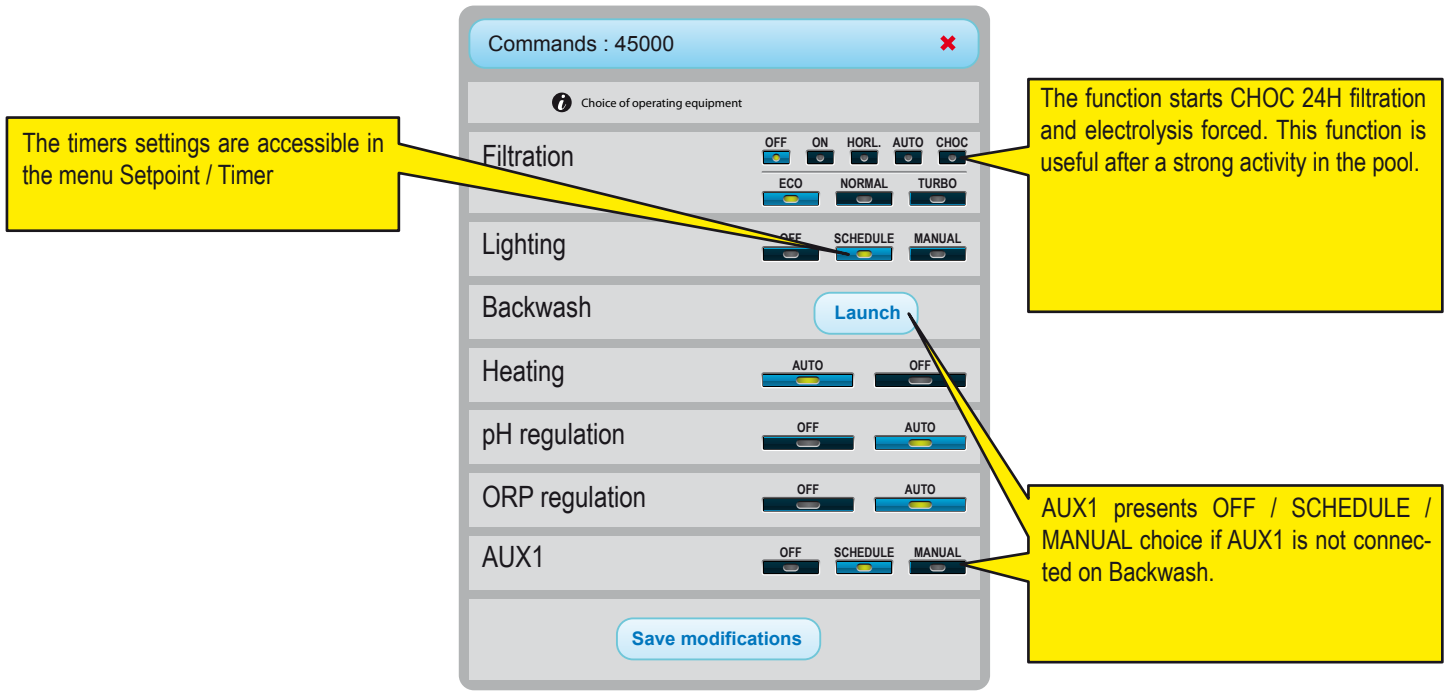
Summary menu

The menu *Summary* is the main menu. It appears as a dashboard that displays all the parameters of the current situation.



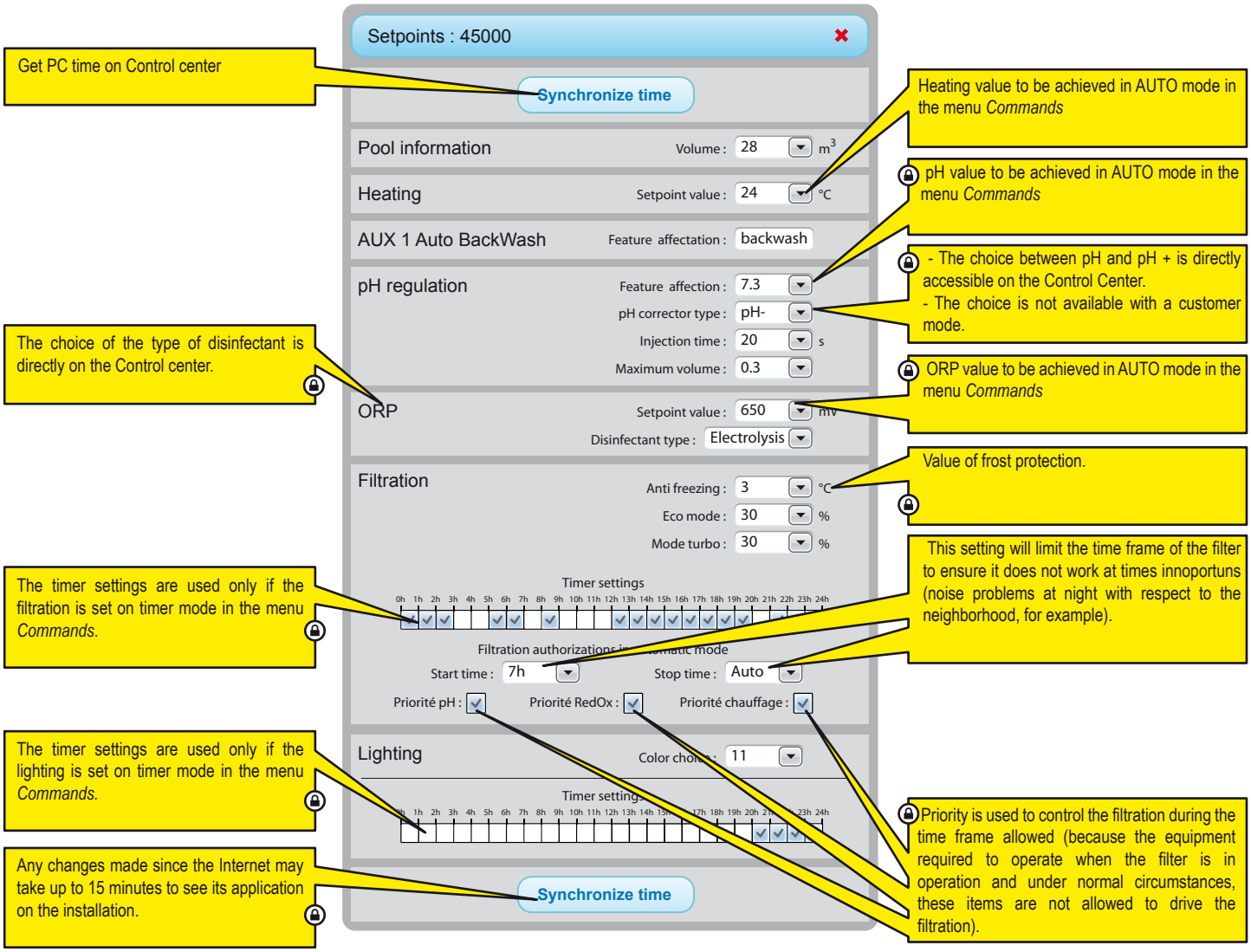
Commands menu

The menu *Commands* is used to launch an equipment or to set the mode.



Setpoints menu

This menu allows to set all the setpoints of connected equipments.
Some settings can be only accessible through a professional account.

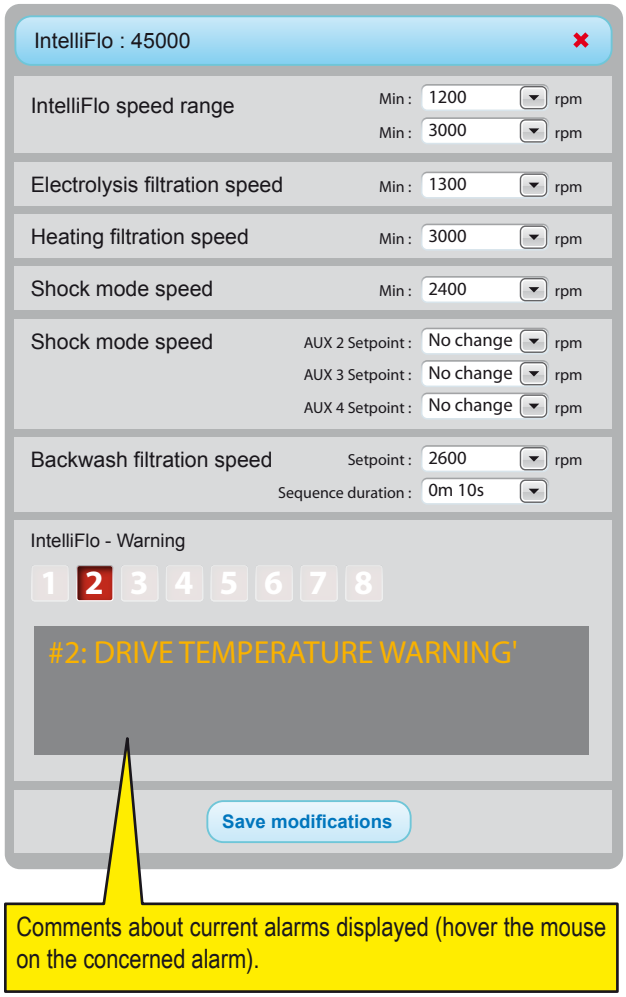


Display depend of type of equipments connected and options chosen.

: not accessible in pool owner account

IntelliFlo® menu

IntelliPool® enables you to obtain the most efficient and economic use of your IntelliFlo® pump. The system can operate with every type of IntelliFlo® equipped with the VS, VF or VSD variable frequency drive.
Before setting up the speeds in the IntelliPool® menu on IntelliPool®, it is advised to run an operational test in order to establish the most functional speed settings.. You can do this before the actual installation or by disconnecting the IntelliFlo® Communication cable. This way you can use the pump keypad to quickly change speeds on the pump. Consult your IntelliFlo® manual for precice explanation on how to change speeds on your pump. (IntelliFlo® VF customers need to use the manual button using the 'ste speed' command.)

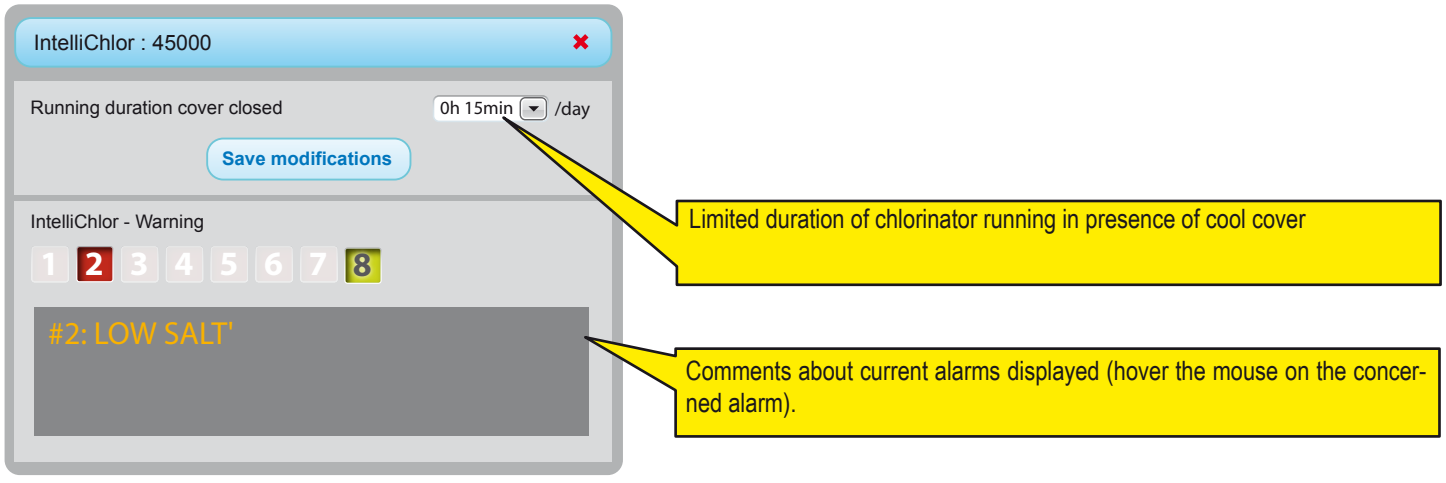


Mimimum speed: find out the mimimum speed still generating sufficienbt flow in the pool. IntelliPool® will not run lower then this speed. The lower you can establish this speed the better the energy savings.
Maximum: speed: this is generally the speed required for backwashing, the pump will not allow higher speeds in order to prevent damage to the pool system.
Heater: your heatpump will require a mimimum flow; select a speed at wich the heatpump can operate. You can adjust the speed upwards until the heatpump compressor is activated. Set the speed another 5% higher.
Salt Chlorinator: your salt chlorinator will require a mimimum flow. Determine what RPM is required for your chlorinator to be activated and set the menu at a 5% higher value.
Aux speed: for auxiliary features 3 options are possible (selectable in the scroll menu)
1. no change: pump will continue normal filtration speed while aux feature is active (example: garden lights).
2. OFF: pump will stop while aux is active (example robotic cleaner).
3. set specific RPM: the pump will run at a specific RPM while aux feature is active (example: fountain).

Automatic backwash valve: if the aux feature is set-up as an automatic Backwash valve, specific BW speed and time can be set in this section.
With these setting in place IntelliFlo will run at the lowest, most economical speed, but will increase this speed only when required for the specified functions.

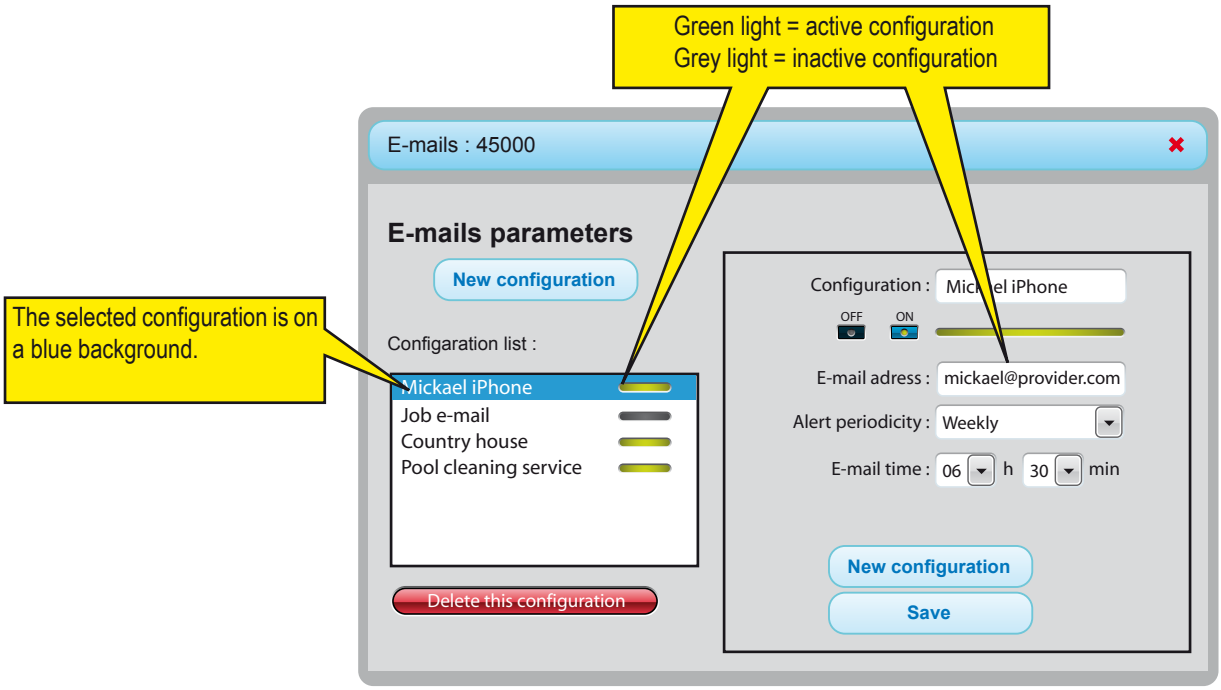
IntelliChlor® menu

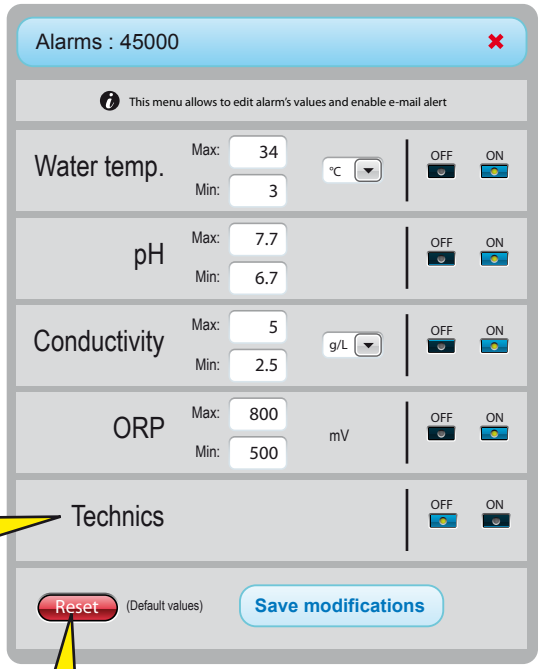
The IntelliChlor® menu allows to adapt the running duration in case of pool cover presence and to know the type of warning



E-mails and alarms menu

These two menus allow you to configure different e-mails with alarms that may be different alarms to display indoors.
The values of the alarm condition also display check marks and crosses on the menu SUMMARY and HISTORICY.



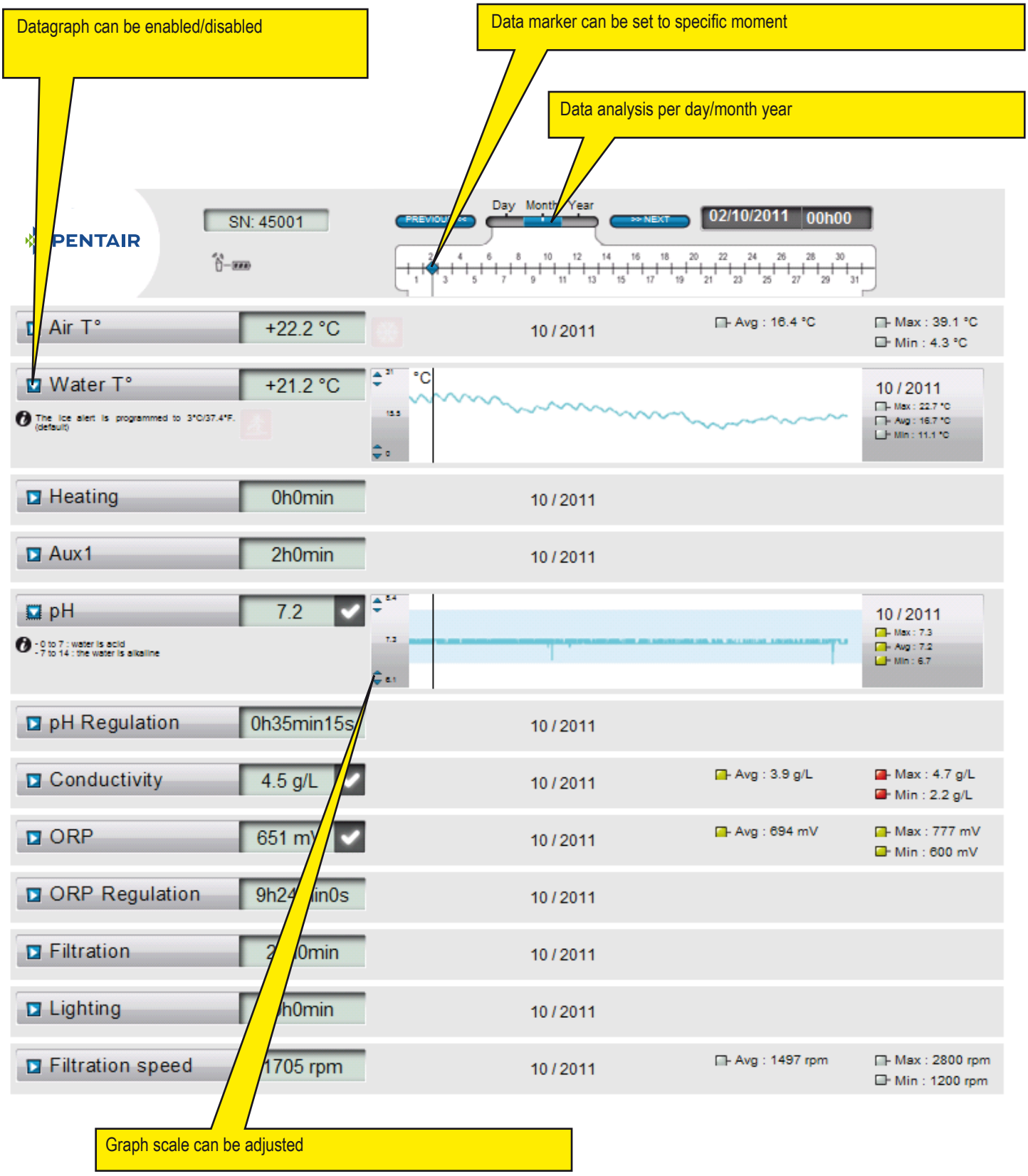


Technics is alert for internal technical information (filtration order impossible, filter wash needed ,pH corrector empty tank, disinfectant empty tank, probe calibration needed, check communication cable...).

Reset = e-mails alarms values by default :
Water temperature : Min=+3.0°C Max=+40.0°C
pH : Min=7.1 Max=8.4
Conductivity : Min=2.5 g/l Max=5.5 g/l
ORP : Min=500 Max=800

Data History menu

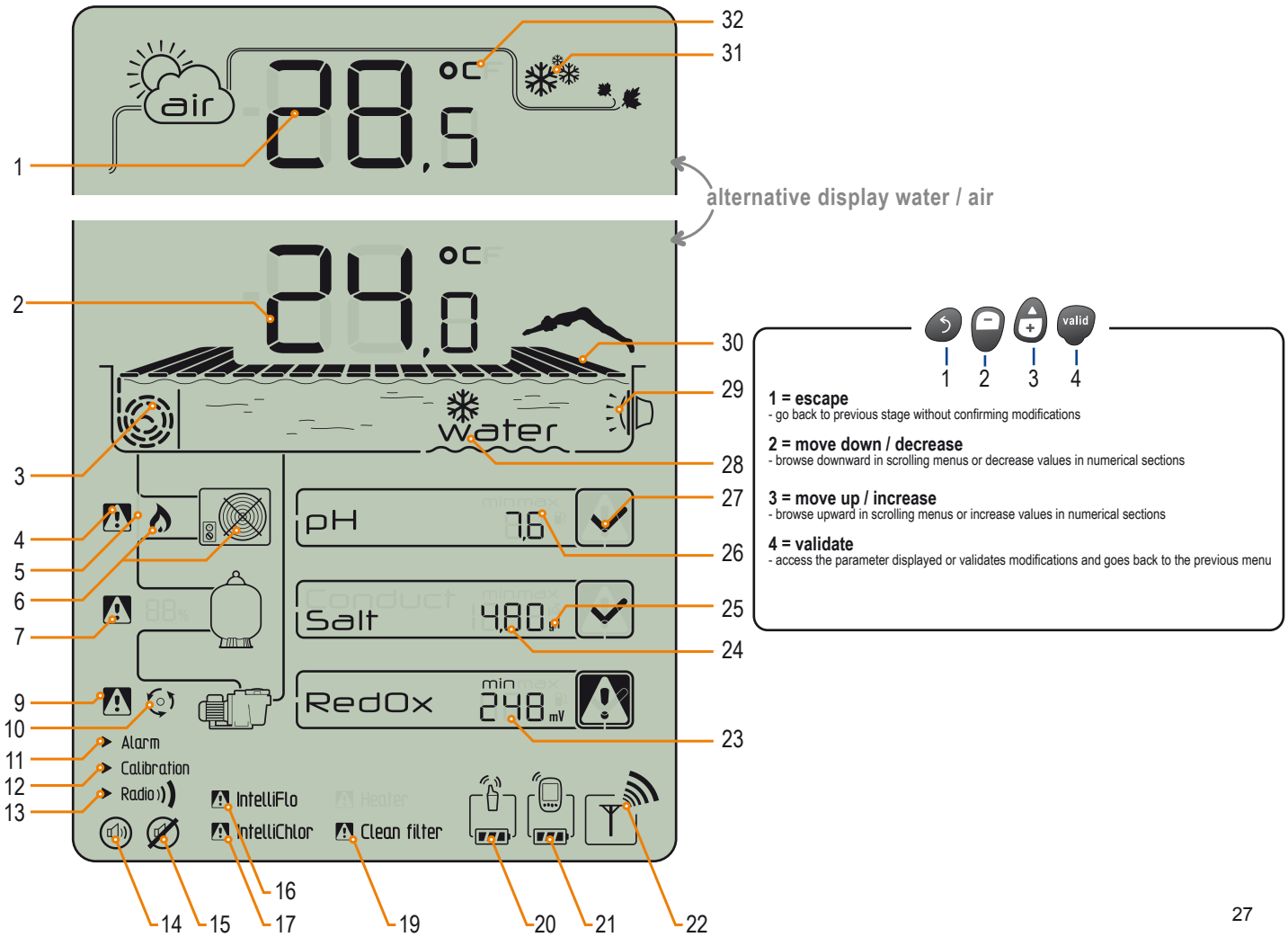
The history menu is a powerful tool enabling you to analyse and compare data from your installation . In many cases this tool will allow the pool professional to solve problems without having to be present on-site.
Data are available up to 10 years.



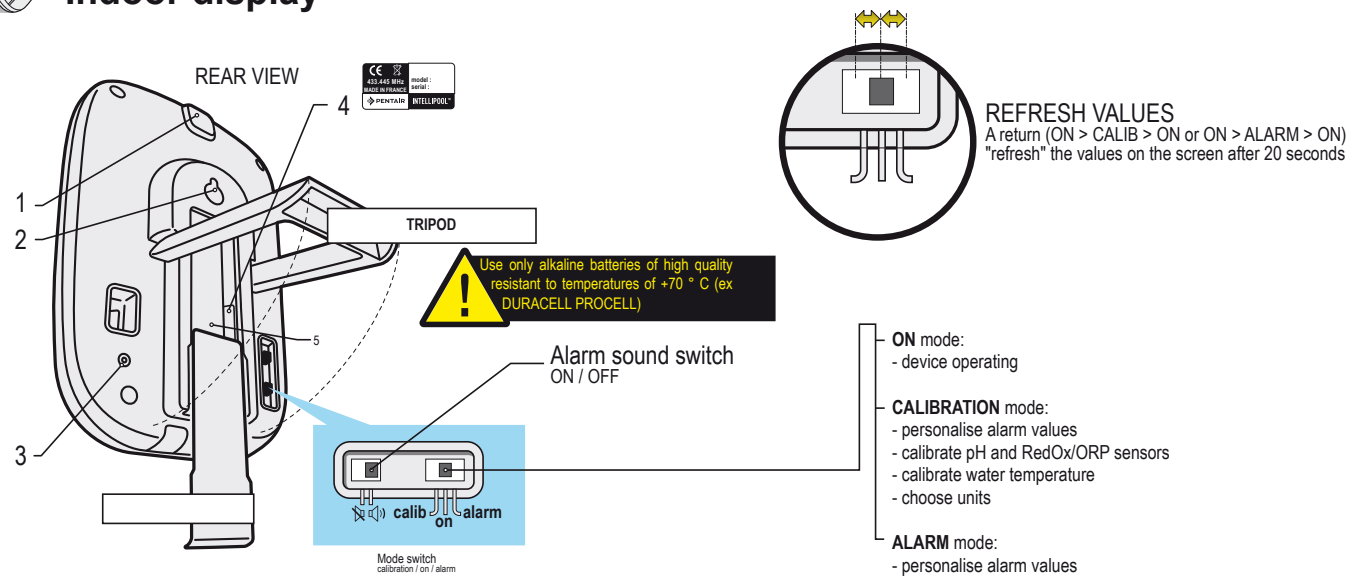
Indoor display

The Indoor remote display informs all parameters (updated every 15 minutes) of the water and air temperature.
Intended for indoor use, pre-programmed alerts allow a quick glance to check the chemical balance of water without the analysis tedious at the poolside.
Moving the display can cause signal loss. If there is more than 1 hour out of reach, all information is erased.
The remote display can be used put on a tripod or wall mounted (after testing the signal range)

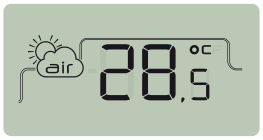
1 : Air temperature (° C or ° F)
2 : Water temperature (° C or ° F)
3 : Pool cover rolled
4 : Heating alert
5 : Operating without heat
6 : Heating running
7 : Sand filter alert
8 : Efficienty percentage
9 : IntelliFlo® alert
10 : IntelliFlo® running
11 : Alarm Mode
12 : Calibration Mode
13 : Radio mode
14 : The alarm ON
15 : OFF the alarm
16 : IntelliFlo® alert
17 : IntelliChlor® alert
18 : Heater alert
19 : Clean filter required
20 : Indoor display batteries level
21 : Radio relay batteries level
22 : Radio force signal
23 : Value of ORP in mV
24 : Value of the rate of salt (g / l) or conductivity (ĩS)
25 : Self-adaptive unit (g / l) or (µS)
26 : pH value
27 : Tick for a correct value
28 : Water temperature alert (<+3°C)
29 : Spot litght ON
30 : Pool cover closed
31 : Risk of snow
32 : Temperature unit (° C or ° F).



Indoor display



The display is intended for indoor use. Do not expose to sunlight or rain. Exposure to sunlight (UV) or rain can damage it irreversibly.



Temperatures

Remote display provided alternately (in ° C or ° F, see p34) the air temperature along with the cloud symbol and temperature of water accompanied by the words "water" symbol.
Note : direct exposure of the Radio relay to sunlight disturbs the air temperature measuring. If the installation includes two Radio relays, is that which the jumper is ON, which will provide these values, see p13. In the event of a discrepancy between displayed temperature value and the reference value provided by a standard instrument, it is possible to recover this gap via "calibration", see p34.

Snow / freezing risk detection

The freezing pictogram for the air temperature is displayed if the temperature measured by the Radio relay is below +3°C (37.4° F).

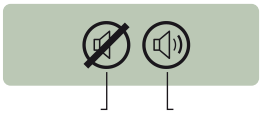
Ice risk detection

The water freezing pictogram is displayed if the pool temperature is below +3°C (37.4°F). There is a risk of ice forming on the surface; action must be taken to prevent damage to the pool. If filtration is connected, Control unit will automatically launch the filtration. In case of technical room heated, +3°C set point can be changed in ControlCenter/Setting/Install/ Filtration menu.

Current mode

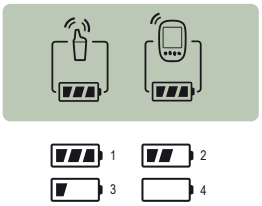
Alarm mode and Calibration mode correspond to the position of the switch on the back of the remote display. RADIO mode means that the radio is programming a new element on the IntelliPool® network.

Activate / deactivate sound



On remote display, an audible alert for the different alarms and a discreet button beep are available. This pictogram illustrates sound activation and deactivation, accessible via the switch on the back of remote display.

Batteries level

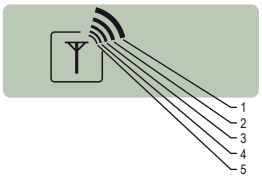


The level of the batteries is displayed under the pictogram representing each element.
The service life of the batteries is over 1 year, but may vary according to climate conditions.

> As soon as the level reaches "Batteries very low", the batteries should be changed: (Radio relay: 4 X LR6 / Remote display: 4 X LR6).

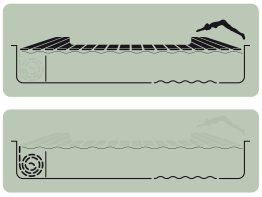
1 : Batteries full 2 : Batteries ok 3 : Batteries very low 4 : Batteries to replacen

Network radio signal strength



The IntelliPool® network signal strength depends on the geographic location of the Radio relay (long distance, pool situated above the house, and the presence of an enclosing wall are detrimental), on the house materials (reinforced concrete and metal buildings are detrimental) and on the Radio relay bracket (metal pickets or galvanised drainpipes are detrimental).
If after testing different radio relay location configurations, the network signal remains too low or non-existent, place a second Radio relay between equipment room and remote display to optimise the signal strength (test before fixing the elements).
Adding an element to the IntelliPool® radio network entails programming it (see p31).

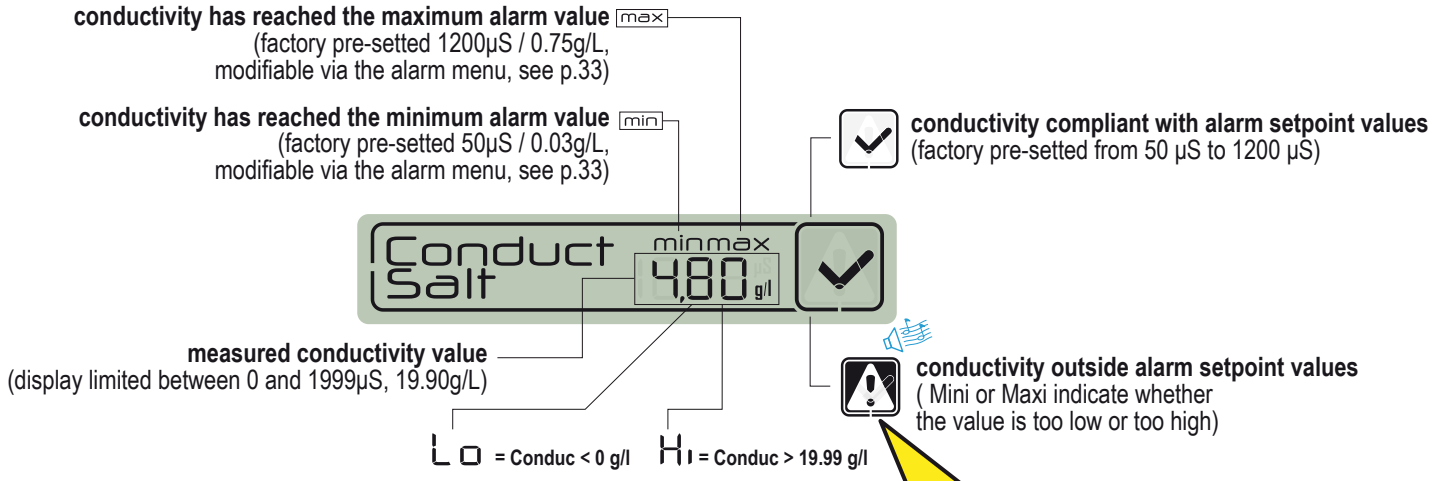
Pool cover position



For swimming pools equipped with a pool cover and after the connection is made on Control center, the position (cover unfolded, cover wrapped) is displayed.

Conductivity / Salt concentration

A water's capacity to allow an electric current to flow, conductivity is proportional to concentration of dissolved minerals (partly originating from water treatment products). The value in µS reveals "the water age of your pool".



Conductivity in a salt electrolysis pool (in g/l)

> Conductivity too low (depending on type of electrolyser): add salt up to the value advised for your electrolyser.

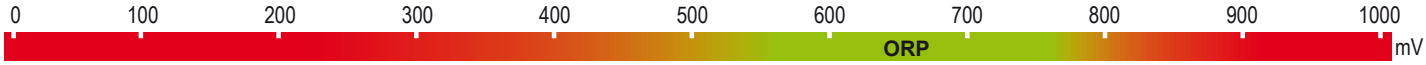
> Conductivity is too high (depending on type of electrolyser): change the pool water (drain + refill) until the desired value is obtained.

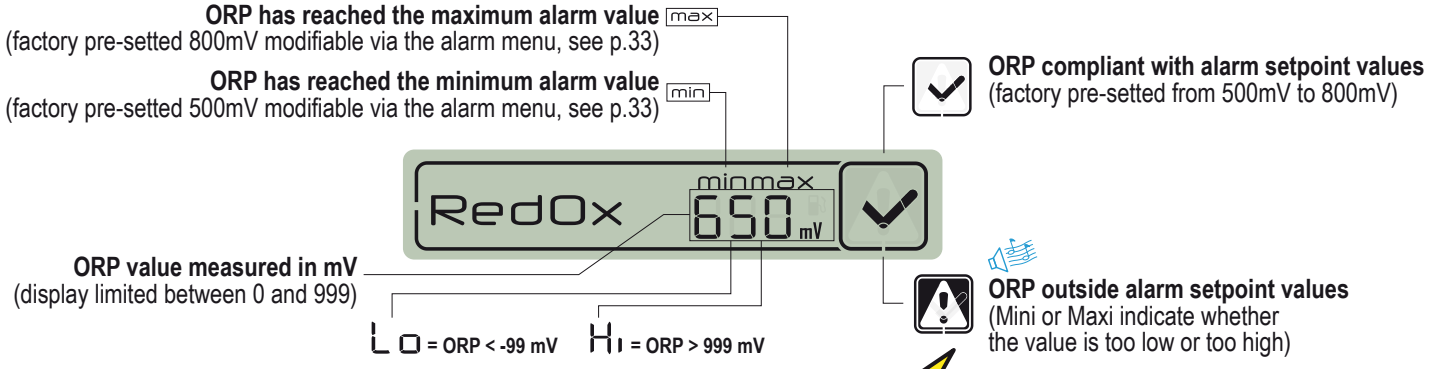
Conductivity in a pool without salt electrolysis (in µS/cm)

> Conductivity is too high (> 1200 µS, modifiable default alarm value): change the pool water (drain + refill) until a value of below 1200 µS is obtained. Water with conductivity of over 1200µS is said to be "buffered", and treatments become ineffective.

ORP : Oxidation-Reduction Potential

Concentration level of disinfectant (chlorine, bromine, active oxygen ...) present in the pool. For this "disinfection potential" measurement, it is usually advised to keep to between 500 mV and 800 mV. The Oxidation-Reduction Potential tells us about the oxidant quality in the water. It is the result of the ratio quantity of disinfectant / quantity of pollution.





EXCESSIVELY HIGH ORP CAUSES SKIN IRRITATION AND MAY DAMAGE THE ELEMENTS OF YOUR POOL.
ESCESSIVELY LOW ORP MAY BE A HEALTH HAZARD

> Make sure that:

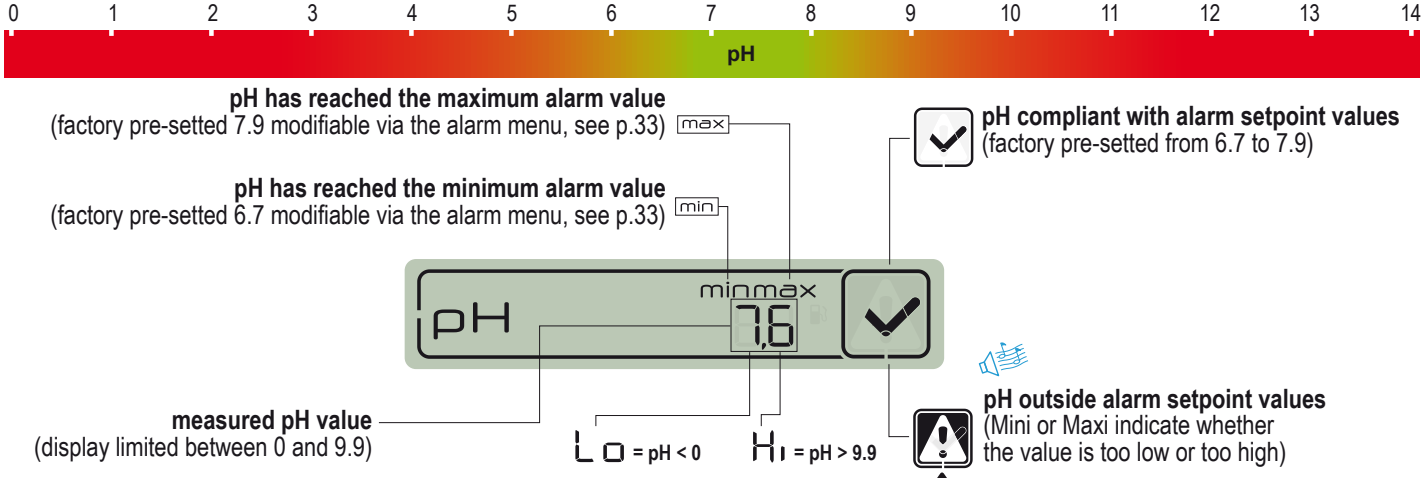
- the bottle has been removed from the ORP sensor
- the ORP sensor is not clogged

> Manual regulation: > Add disinfectant (chlorine, bromine, active oxygen...) to the desired value.

> Automatic regulation: > Have your pool dealer verify that your equipment is working correctly.

pH value

pH is a (unitless) quantity measuring the acidity (0 to 7) or alkalinity (7 to 14) of the pool. pH is the concentration of hydrogen ions. For a pool, the generally advised ideal pH is close to 7.3 (to be confirmed with your pool dealer, according to your installation).
The accuracy of the pH measurement is strongly tied to regular maintenance of the pH probe. It is advisable to check regularly for any clogging, and to calibrate it before the summer season (see p.33). The pH high and low alarm setpoint values are preset in the factory to 6.7 and 7.9. These values can be modified via alarm mode (see p.33).



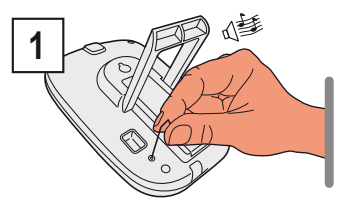
⚠ **EXCESSIVELY HIGH OR LOW pH CAUSES SKIN IRRITATION**
> Make sure that:
- the bottle has been removed from the pH probe
- the pH probe has been calibrated in the last 6 months (see p.35)
- the pH probe is not clogged

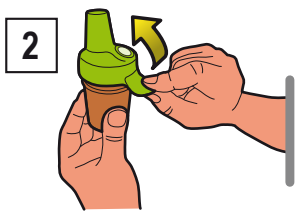
> Manual regulation: apply some "pH-" or "pH+" product, depending on the pH deviation.
> Automatic regulation: verify that the equipment is working properly

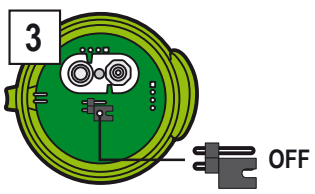
Add a new radio relay

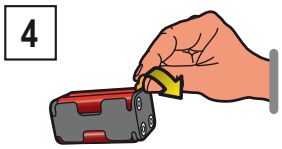
This RADIO mode enables the following to be added a second radio relay to cope with demanding radio range situations (lay of the land, very long distances...).

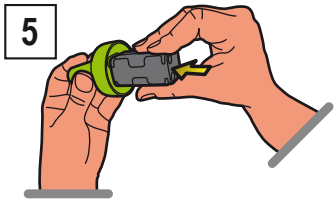
1 - Press RESET briefly (0.5 s) with a paper clip at the back of the remote display. *note: Pressing and holding (>4 s until the beep) activates a setpoint values reset.* > The remote display will then display «radio».
2 - Take off the pot by pulling the tab on the radio relay.
3 - Place the jump in OFF position to avoid to perturb the air temperature values of the radio relay#1, see p3.
4 - Remove the battery insulation film.
5 - Reconnect the battery holder.
6 - The red LED flashes max 120s untill the radio relay is recognised > Put the container's cover back on.

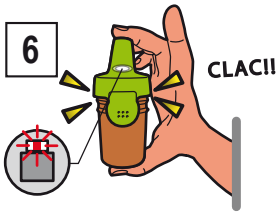


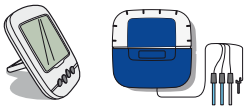








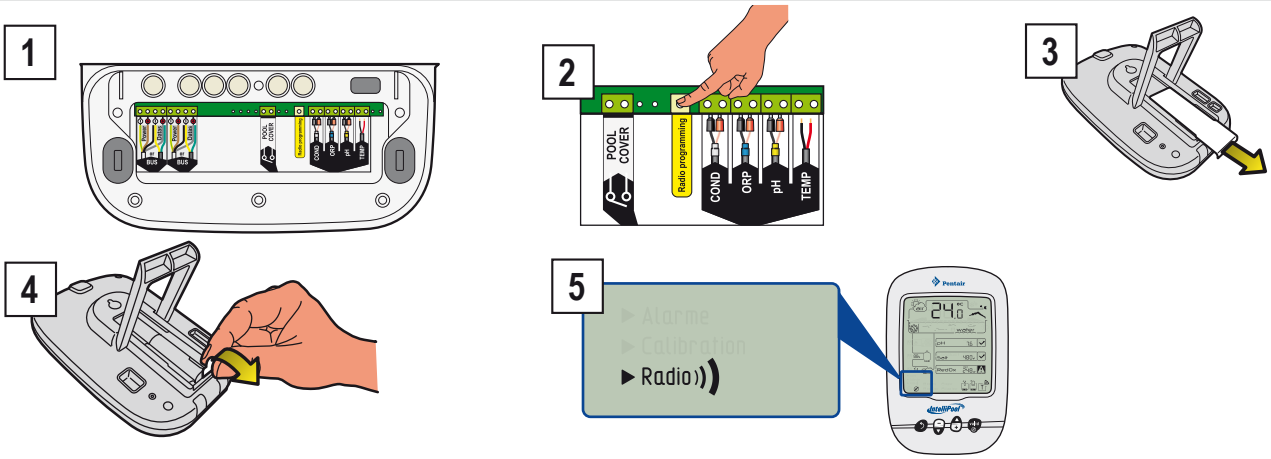




Reprogramming the original indoor remote display

The components of a set are factory matched by a single radio code which prevents any risk of interference with other IntelliPool® (neighborhood, several ponds nearby ...).

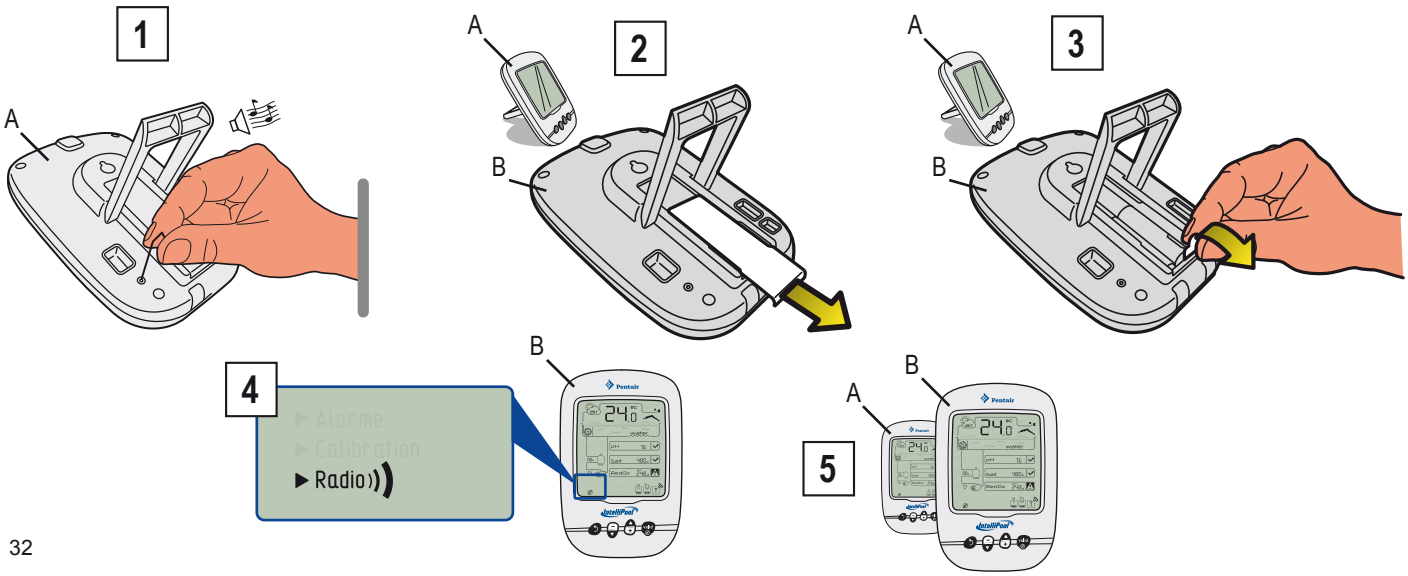
1 - Remove the blue rubber cover of the Probe unit.
2 - Click on "radio programming" with a paper clip. > The yellow LED lights up, Probe unit then emits a radio code learning for 5 min note: starting up the remote display will activate automatic recognition/programming of a radio code.
3 - Remove the battery hatch.
4 - Remove the insulating film batteries.
5 - The remote display goes into learning mode radio > The remote display displays values. > Replace the battery hatch.



Add a new Indoor remote display

This RADIO mode enables to add a second remote display to set up a second source of information reading from your pool.

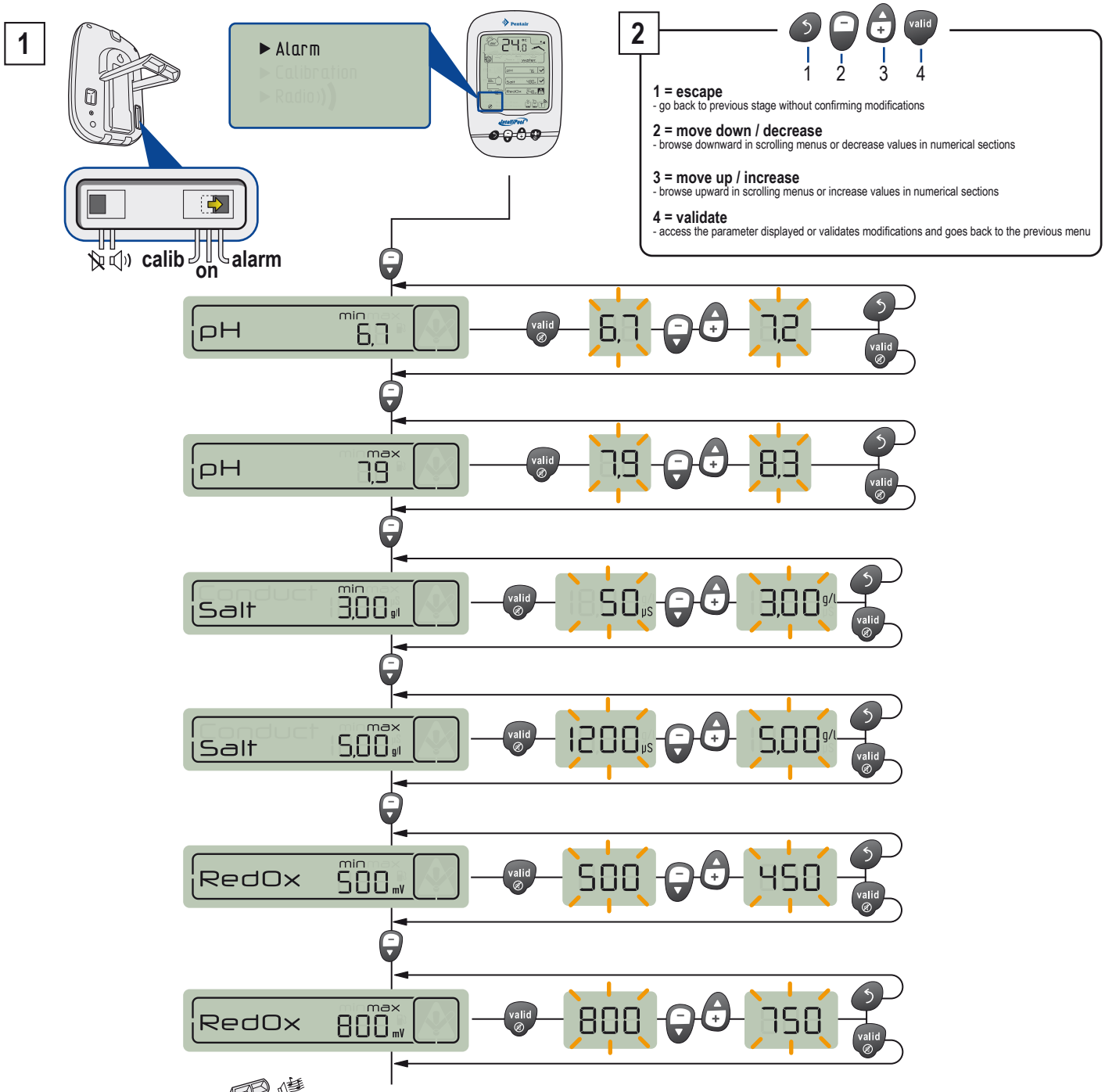
1 - Press RESET briefly (0.5 s) on the original remote display «A» (it displays «radio»). Note: Pressing more than 4 s until the beep activates a alarm values reset.
2 - Remove the battery hatch of the new remote display «B».
3 - Remove the battery insulation film of the new remote display.
4 - The new remote display switches to radio programming mode.
5 - The new remote display displays the same values as the original remote display. Replace the battery hatch. Note: If the values of alarms original remote display have been customized, it must be refered manually to the new remote display for identical alarms.

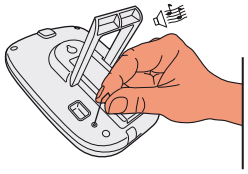


ALARM MODE - Modification of alarm setpoint values

With this mode you can modify the setpoint value of:
- the pH high alarm (factory pre-setting 7.9)
- the pH low alarm (factory pre-setting 6.7)
- the conductivity high alarm (factory pre-setting 1200µS)
- the conductivity low alarm (factory pre-setting 50µS)
- the RedOx/ORP high alarm (factory pre-setting 800 mV)
- the RedOx/ORP low alarm (factory pre-setting 500 mV)

1 - Push the switch to alarm mode (rear face of indoor display). note: All these values remain stored in a battery change
2 - Set the value following the navigation operating principle.
3 - When the last modification is valited, set the switch back to ON mode



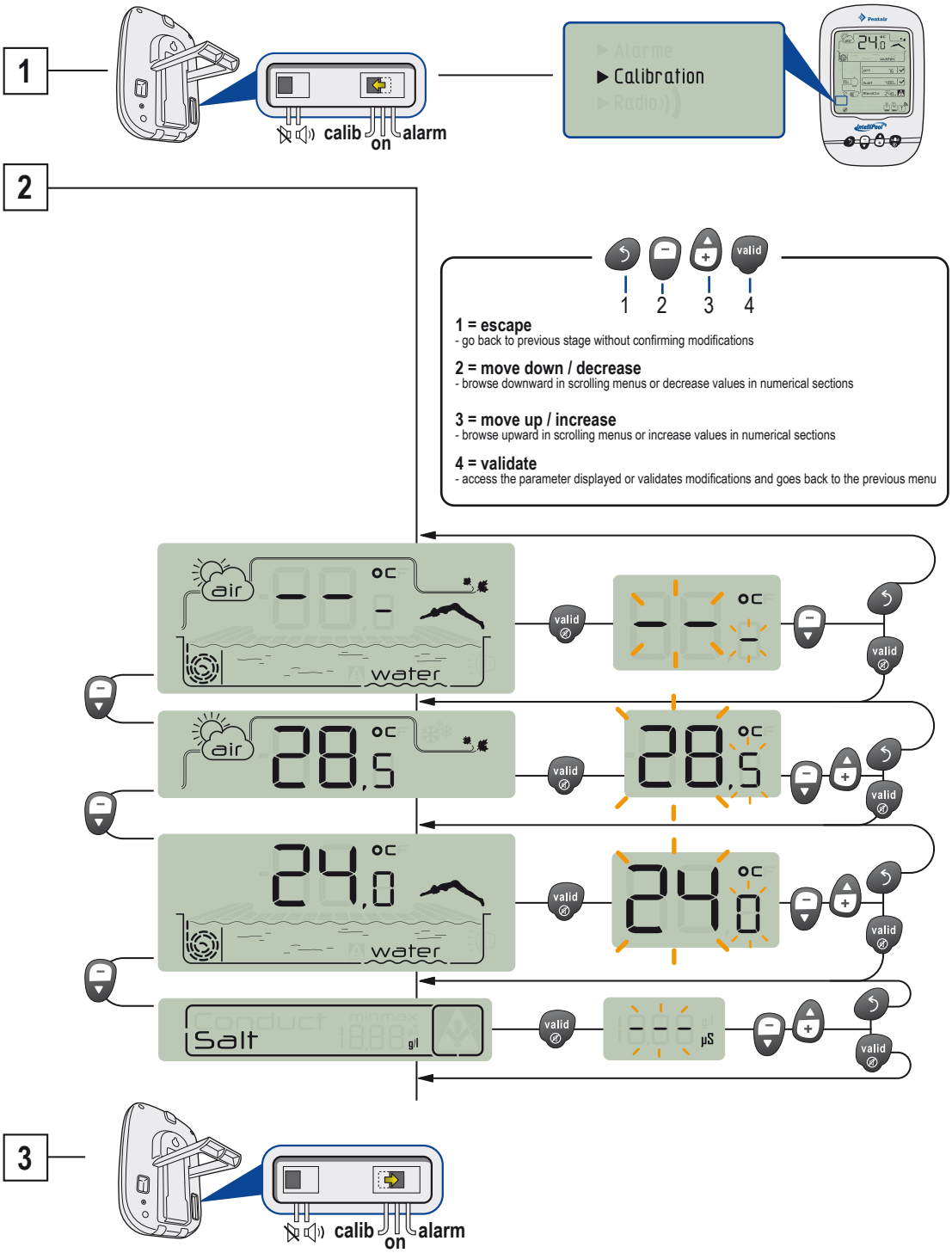


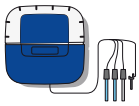
To restore all the device's default values, press and hold (4 s) RESET with a paper clip on the rear of the remote display.The operation is validated by a long beep.

CALIB MODE - Changing units & deliberate correction of values

In spite of calibration of measurement sensors, it may be that a value is out of line with another measurement reference (regular thermometer...). For this reason you have the option of deliberately correcting certain values as the units of the air temperature & water temperature (factory pre-setting °C) and the conductivity (factory pre-setting µS) or values of air temperature and water temperature.

1 - Push the switch to CALIB mode (rear face of indoor display).
2 - Set the value following the navigation operating principle.
3 - When the last modification is valited, set the switch back to ON mode

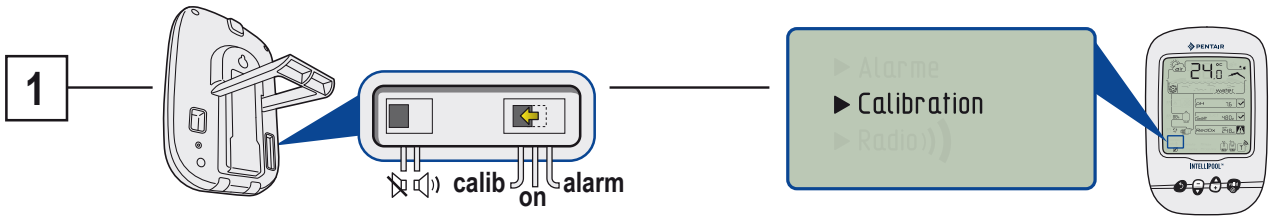


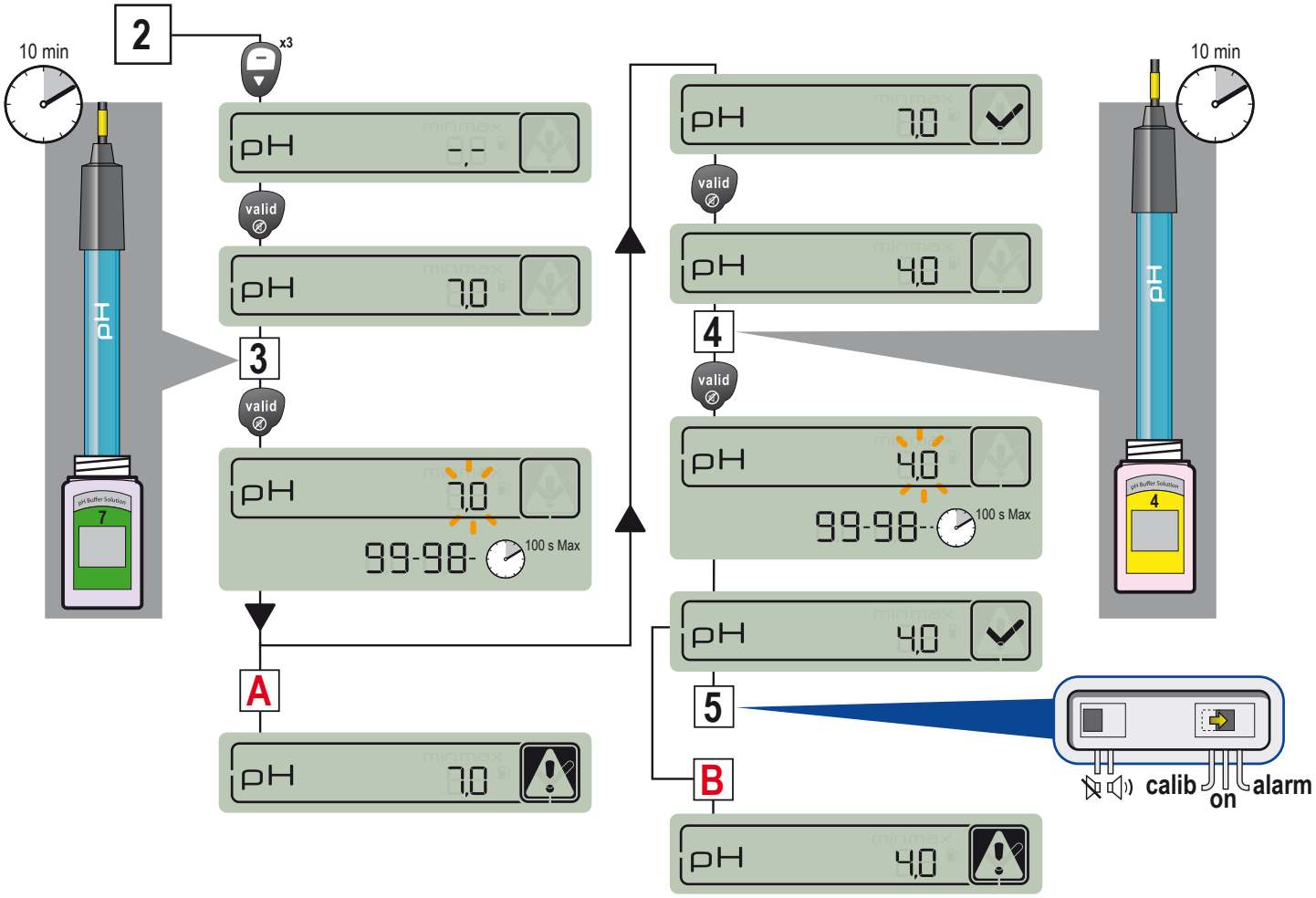


CALIB MODE - Calibrating a pH probe

By its nature, a pH probe needs to be regularly recalibrated (preferably before the season). The lifetime is aprroximatively 2 years.
For this operation, you will need to hand the remote display and the "pH4" and "pH7" standard bottles delivered. The pH is temperature dependent, this procedure requires to be practiced in the shade (25 ° C / 77 ° F).

1 - Push the switch to CALIB mode (rear face of indoor display).
2 - Set the value following the navigation operating principle.
3 - Dip the end of the pH probe in the bottle of pH 7 standard solution during 10 min minimum and then VALID. A 99s countdown is launched.
A - PROCEDURE FAILED: > Check that there is a pH 7.0 solution in contact with the probe during the procedure > The probe is no longer working (to replace).
4 - Dip the end of the pH probe in the bottle of pH 4 standard solution during 10 min minimum and then VALID. A 99s countdown is launched.
5 - Operation successful. > Set the switch back to ON mode.
B - PROCEDURE FAILED: > Check that there is a pH 4.0 solution in contact with the probe during the procedure > The probe is no longer working (to replace).

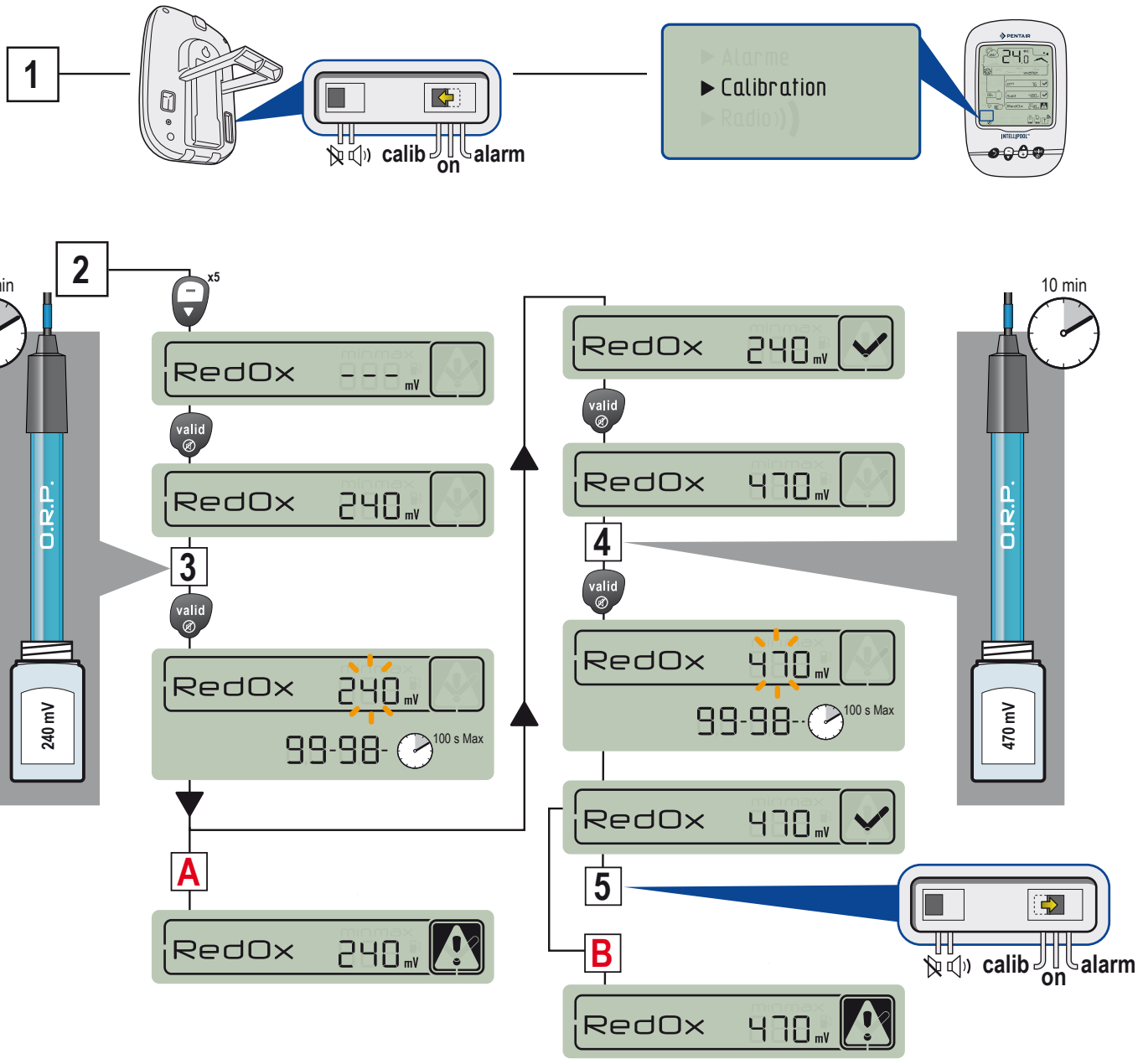




CALIB MODE - Calibrating a OPR probe

The ORP probe can be recalibrated. The lifetime is aprroximatively 5 years. By nature, an ORP sensor drift few, and requires exceptionally to be recalibrated. Therefore, ORP standard solutions are not provided because it is very rare to calibrate and it can be done some years after delivery but a ORP calibration solution can't be stocked more than 2 years. For this operation, you will need to hand the remote display and 240mV and 470mV standard bottles. This procedure would be performed in the shade.

1 - Push the switch to CALIB mode (rear face of indoor display).
2 - Set the value following the navigation operating principle.
3 - Dip the end of the ORP probe in the bottle of ORP 240mV standard solution during 10 minutes minimum and then VALID. A 99s countdown is launched.
A - PROCEDURE FAILED: > Check that there is a ORP 240mV solution in contact with the probe during the procedure > The probe is no longer working (to replace).
4 - Dip the end of the pH probe in the bottle of ORP 470mV standard solution during 10 min minimum and then VALID. A 99s countdown is launched.
5 - Operation successful. > Set the switch back to ON mode.
B - PROCEDURE FAILED: > Check that there is a ORP 470mV solution in contact with the probe during the procedure > The probe is no longer working (to replace).



GARANTEE

For the consumer, Pentair guarantees that the product, with the exception of the consumables or parts with limited resistance (e.g. batteries, pH sensor, O-ring...), is guaranteed against any quality, material and manufacture defect for a period of TWO YEARS from the date of installation.

For specific warranty conditions refer to the Pentair product catalogue.

Exclusions and limitations:
Besides the considerations above, Pentair does not offer any guarantee (explicit, implicit, statutory or otherwise), for the product or software that it contains or accompanying it, regarding the accuracy of the information provided or suitability for a particular purpose.
Pentair is in no way liable for the consequences of an action performed due to a value displayed.
Under this guarantee, Pentair is only obliged to repair or replace products meeting the conditions of this guarantee. Pentair is in no way liable for any loss or damage due to the products, service, under this guarantee or otherwise, including - financial losses; the price paid for the product; loss of profit, revenue, data, enjoyment or use of the product or any associated product; indirect or fortuitous loss or damage.

SPECIFICATIONS - Technical characteristics

- Weight of assembly: approx. 3 kg
- Standard: CE
- Radio range: 100 m in free field
- Radio frequency: 433,445 MHz
- Guarantee excluding sensors and consumables: 2 years
- Water-tightness: Probes/Control Centers IP61 / Radio relay IP65 / Indoor display IP40 / Remote control IP66
- Hand assembled in France

DECLARATION OF COMPLIANCE : Adheres to directive RTTE 99/5/EC
EMC : compliance demonstrated by adherence to standard EN 301-489
Safety : compliant with standard EN 60950-1/2001
Radio : compliance demonstrated by adherence to standard EN 300-220 covering the essential requirements of the RTTE directive.
Exposure to radio frequency signals: As per the recommendations of 1999/519/EC, when using the device, keep the products over 20 cm away from your body.

Notes : - compliance has been evaluated as per the procedure described in Appendix III of the RTTE directive.
- receiver class (if applicable): 3

At St. Laurent du Var / 12 Juillet 2011

Precautions and maintenance

As radio relay is mounted outdoors, the appearance of traces of deposits is completely normal.
The indoor display is intended exclusively for indoor use.
Exposure to the sun (UV) or rain may damage it irreversibly.
> Do not subject the device to impacts, forces, dust, excessive temperature or humidity changes that could alter the device's operation or limit its service life.
> Do not submerge the device in water.
> Clean the exterior with a micro-fibre cloth or a soft cloth. Do not use solvent, abrasives or acids.

Spare parts

The original spare parts necessary to maintain your device Pentair, are available from your dealer.
UTILISATION OF PARTS OTHER THAN PENTAIR GENIUNE PARTS VOID THE WARRANTY.

INTP-5210	IntelliPool ph probe + ph4 & ph7
INTP-5220	IntelliPool ORP redox probe
INTP-5230	IntelliPool conductivity probe
INTP-5240	IntelliPool ext antenna for control ctr
INTP-5150	IntelliPool Radio relay
INTP-5160	IntelliPool Indoor display
INTP-5161	IntelliPool Remote Control
H-52-0272	SENSOR TMP IT/ET/ST 10KOHM THERMISTOR20F
R350122	IntelliFlo 2wire comm cable

SAVE THESE INSTRUCTIONS !

PENTAIR AQUATIC SYSTEMS

INDUSTRIEPARK WOLFSTEE, TOEKOMSTLAAN 30, 2200 HERENTALS - BELGIUM, WWW.PENTAIRPOOLEUROPE.COM

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